



FULLY EXECUTED
Purchase Order No: 4300636463
Original PO Effective Date: 09/27/2019
PO Issue Date: 09/27/2019
Valid From: 10/01/2019 To 09/30/2024
*Filed and Attested by the
Office of Judicial Records
12 NOV 2021 03:10 pm
R. SCHREIBER*

Your SAP Vendor #: 383098

Please Deliver To:
PSERS

Supplier Name/Address:
AON HEWITT INVESTMENT CONSULTING INC
39584 TREASURY CTR
CHICAGO IL 60694-9000 US

5 N 5th Street, Third Floor
Harrisburg PA 17101-1905 US

Supplier Phone Number: 847-295-5000

Please Bill To:

Save time, reduce cost, get paid faster:
Email PDF invoice to 69180@pa.gov
<https://www.budget.pa.gov/Programs/Pages/e-Invoicing.aspx>

Or mail paper invoice to:
Commonwealth of Pennsylvania
PO Box 69180, Harrisburg, PA 17106

Purchasing Agent

Name: Cathy Gusler
Phone: 717-720-4889
Fax: 717-783-8760

Purchase Order Description:
Investment Consulting

This Purchase Order is comprised of: The above-referenced Solicitation, the Suppliers Bid or Proposal, and any documents attached to this Purchase Order or incorporated by reference.

Suppliers must provide four mandatory elements on PO invoices: PO Number, Invoice Date, Invoice Number, and Invoice Gross Amount. Failure to comply will result in the return of the invoice. Additional optional information such as supplier name, address, remit to information and PO Line Item information will improve invoice processing.

Item	Material/Service Desc	Qty	UOM	Delivery Date	Net Price	Price Unit	Total
1	Defined Benefit/Defined Contr Component	4.000	Each	10/01/2019	160,793.50	1	643,174.00
Item Text Vendor to provide Investment Consulting, Performance Evaluation, and other related services for all PSERS' asset classes for the period 10/1/19 thru 9/30/20.							
2	Defined Benefit/Defined Contr Component	4.000	Each	10/01/2020	167,152.50	1	668,610.00
Item Text Vendor to provide Investment Consulting, Performance Evaluation, and other related services for all PSERS' asset classes for the period 10/1/20 thru 9/30/21.							

Information:

Total Amount:
SEE LAST PAGE FOR TOTAL OF ALL ITEMS

Currency: USD

Supplier's Signature _____

Title _____

Printed Name _____

Date _____

Case ID: 210601197



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Supplier Name:
AON HEWITT INVESTMENT CONSULTING INC

Item	Material/Service Desc	Qty	UOM	Delivery Date	Net Price	Price Unit	Total
3	Defined Benefit/Defined Contr Component	4.000	Each	10/01/2021	170,085.00	1	680,340.00
Item Text Vendor to provide Investment Consulting, Performance Evaluation, and other related services for all PSERS' asset classes for the period 10/1/21 thru 9/30/22.							
4	Defined Benefit/Defined Contr Component	4.000	Each	10/01/2022	174,131.75	1	696,527.00
Item Text Vendor to provide Investment Consulting, Performance Evaluation, and other related services for all PSERS' asset classes for the period 10/1/22 thru 9/30/23.							
5	Defined Benefit/Defined Contr Component	4.000	Each	10/01/2023	178,237.25	1	712,949.00

General Requirements for all Items:

Information:

Total Amount:
**SEE LAST PAGE FOR TOTAL OF
ALL ITEMS**

Currency: USD

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Supplier Name:
AON HEWITT INVESTMENT CONSULTING INC

Header Text

Vendor to provide Investment Consulting, Performance Evaluation, and other related services for all PSERS' asset classes.

The following Riders are attached and incorporated by reference and made a part of this purchase order:

- Rider 1 - Purchase Order Terms & Conditions
 - Rider 2 - RFP 2018-6 Investment Consulting Services Final
 - Rider 3 - RFP 2018-6 Aon Proposal Document
 - Rider 4 - Commonwealth Terms & Conditions
 - Rider 5 - License Agreement for MGR Database
 - Rider 6 - Information Security Addendum
- Cost Proposal Update

In the event of a conflict between or among the provisions of the above attachments, the controlling provision will be determined by the order of precedence listed above.

No further information for this PO.

Information:

Total Amount:
3,401,600.00

Currency: USD

Case ID: 210601197

RIDER 1

PURCHASE ORDER **TERMS AND CONDITIONS**

Pursuant to purchase order number 4300636463 (“Purchase Order”), AON HEWITT INVESTMENT CONSULTING, INC. (the “CONSULTANT”) agrees to perform the services set forth therein, those set forth below, those set forth in its Proposal of February 19, 2019, which is attached to the Purchase Order as Rider 3 and incorporated therein by reference, and those set forth in the Public School Employees’ Retirement Board (“Board”) transacting business as the Public School Employees’ Retirement System’s (“PSERS”) Request for Proposal (“RFP”) dated January 18, 2019, which is attached to the Purchase Order as Rider 2 and incorporated therein by reference.

A. Consulting Services for the Public School Employees’ Retirement Fund (the “Fund”), including all asset classes and investments:

1. The CONSULTANT will conduct a comprehensive review and analysis of investment objectives, policies, asset allocation, and portfolio structure, inclusive of defining an investable risk beta portfolio, and recommend changes, if appropriate.
2. The CONSULTANT will conduct a one-time review the adequacy of PSERS’ investment professionals and resources, and recommend changes in writing, if appropriate. The timing of this project will be mutually determined by PSERS and Aon.
3. The CONSULTANT will prepare a written Asset/Liability Study annually for each calendar year and present the results to the Board in August of the following year.
4. The CONSULTANT will recommend appropriate performance and risk benchmarks for individual portfolios, each asset class, and for the total fund.
5. The CONSULTANT will review and make recommendations regarding individual portfolio risk guidelines at least annually.
6. The CONSULTANT will recommend suitable investment opportunities and practical implementation methods; research supporting such recommendations must have been completed within the prior 12 months.
7. The CONSULTANT will recommend appropriate investment strategies, tactics, procedures and practices.

8. The CONSULTANT will provide research reports on asset allocation, investment issues, and description and evaluation of alternative approaches.
9. The CONSULTANT will provide information on market conditions and explain their impact on the Fund's investments.
10. The CONSULTANT will provide PSERS with information on high conviction new managers at the earliest possible juncture to permit PSERS to secure capacity and negotiate terms with promising emergent managers.
11. The CONSULTANT will assist PSERS' investment professionals in conducting public market investment manager searches and facilitate the hiring of suitable institutional quality managers, including:
 - a. providing opportunities and expense reimbursement for PSERS to jointly meet and evaluate new managers at industry conferences;
 - b. providing a list of potential institutional quality managers appropriate for the mandate being considered;
 - c. conducting interviews with potential managers at PSERS;
 - d. conducting on-site due diligence meetings with potential managers prior to their selection; and
 - e. providing assistance with the contract/fee negotiations.
12. The CONSULTANT will provide on-going monitoring and oversight reports for all of PSERS' public market investment managers, including:
 - a. advance notice to PSERS of in-person meeting with investment managers in PSERS' portfolio;
 - b. analysis of the manager's absolute and relative performance in relation to benchmarks, investment objectives, and peer groups, including analysis of ex-post risk-adjusted performance;
 - c. an analysis of attribution, holdings, style, and risk;
 - d. updated research on each investment manager in PSERS' portfolio updated at least once every 18 months to include a review of investment performance, process, and the manager's organization;
 - e. on-site investment and operational due diligence meetings with current investment managers a minimum of every three years;

- f. advice on manager retention/termination; and
 - g. assist in developing a formal manager review process.
- 13. The CONSULTANT will advise PSERS' investment professionals and the Board about new developments in investment management techniques and portfolio management strategies. Analyze how new techniques might improve the investment program and whether they should be considered for implementation.
- 14. The CONSULTANT will make available all firm research, including proprietary research, regardless of the firm department in which it was created. Research must be made available by electronic system.
- 15. The CONSULTANT will provide access and consultation with the firm's research staff.
- 16. The CONSULTANT will meet with the Board to report on investment matters. Generally, there are six regularly scheduled Board meetings annually. Special meetings may be scheduled as needed.
- 17. The CONSULTANT will report the performance results to the Board quarterly, including relative results versus pre-established benchmarks, results versus other public defined benefit pension plans, and the returns relative to the risks taken.
- 18. The CONSULTANT will maintain and provide access to a database of U.S. and non-U.S. investment managers, including their philosophies, processes, organizations, performance, fees, and clients.
- 19. The CONSULTANT will provide and maintain a secure, client-facing, web-based platform that is frequently updated and continuously available to PSERS that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools that allows PSERS' investment professionals to:
 - a. formulate investment policy and implement strategies;
 - b. monitor and evaluate asset class and total fund performance and risk;
 - c. develop asset allocation and rebalancing recommendations;
 - d. select and evaluate public market investment managers, including public market manager research and consultant ratings;
 - e. assess investment risks;

- f. analyze and optimize manager teams; and,
- g. compare the Fund performance, including ex-post risk-adjusted performance, at the asset class and total fund levels to various peer groups.

It is expected that at least 20 years of PSERS historical performance data, by investment portfolio, asset class, and at the total fund level will be included and that the database will be updated on a monthly basis.

Consultant and PSERS agree that the foregoing services shall be made available directly to PSERS through CONSULTANT's proprietary tools ("AON Tools") or indirectly through licensed third party applications ("Third Party Tools").

- 20. The CONSULTANT will provide (a) two, one-day, or (b) one, two-day, on-site, Fiduciary and Governance training sessions per year, which can be new member training, Board member training, PSERS' investment professionals training, or some combination thereof. PSERS reserves the right to videotape any training sessions for educational purposes.
- 21. Any additional Fiduciary and Governance training sessions, in any one year, beyond those provided for in Subsection 20 above will be invoiced and paid quarterly in arrears at per session cost to be mutually agreed upon by the parties in writing.
- 22. The CONSULTANT will advise the Board and PSERS' investment professionals on fiduciary and governance related subjects as requested by PSERS, including the following items:
 - a. The CONSULTANT will provide advice and insights, as may be requested by PSERS, on public pension fund industry common and best practices;
 - b. The CONSULTANT will assist as may be requested with the development of new Board member orientation materials and conduct orientation sessions;
 - c. The CONSULTANT will review and make recommendations, consistent with industry best practices, regarding clarity and documentation of the Board's governance framework, including the Investment Policy Statement ("IPS"), Board and Committee Charters, Delegations of Authority, investment implementation policies and procedures, etc.;

- d. The CONSULTANT will assist as may be requested with the development of a Board authority and delegation matrix, including:
 - i. Clarification of what authority the Board has retained, what authority has been delegated, and to whom, and
 - ii. Delegations to PSERS' investment professionals from the Board and/or CIO.
 - e. The CONSULTANT will assist, as may be requested by PSERS, with strategic planning.
 - f. The CONSULTANT will develop and administer, as may be requested by PSERS, a Board annual self-evaluation process.
23. As a condition of payment of the fees, CONSULTANT shall provide PSERS with invoices specifying sufficient detail to substantiate said fees.
24. During the term of this Purchase Order, Jeanna Cullins shall be primarily responsible for the provision of Fiduciary and Governance services pursuant hereto. In the event that Jeanna Cullins ceases to be employed by the CONSULTANT or ceases to be primarily responsible for CONSULTANT's Fiduciary and Governance activities hereunder, CONSULTANT agrees to discuss in good faith a recommended successor with PSERS before assigning the successor.
25. The CONSULTANT will advise the Board and PSERS' investment professionals on risk-related subjects (e.g., risk measurement, risk mitigation).
26. The CONSULTANT will carry out other assignments that may be specified by the Board and PSERS' investment professionals, as required.
27. The CONSULTANT will conduct an operational risk gap analysis which will include an evaluation of the quality of the operational policies and procedures governing PSERS' investment professionals. The written report will include observations, comparisons to peers and recommendations in the following areas:
- (a) Investment Framework (Front, Middle and Back Office)
 - (b) Trade/Transaction Execution Policies and Procedures
 - (c) Investment and Counterparty Risk Oversight
 - (d) Compliance and Audit Testing
 - (e) Data Governance, Technology and Business Continuity and Disaster Recovery Plans
 - (f) Key service provider selection and monitoring procedures

B. Performance Measurement, Risk, and Attribution Services for the Fund, including all asset classes and individual portfolios:

1. The CONSULTANT will prepare a monthly report containing calculated total return (before and after fees) for asset class, portfolio management styles, and individual portfolios, and compare PSERS' calculated data with benchmarks and with data for a similar population of funds by asset class and portfolio management styles for all of the public market portfolios and composites. Returns should be calculated for the following time periods: one-month, three-months, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 15-year, 20-year, 25-year, 30-year, and since inception, based on data availability.
2. The CONSULTANT will prepare a quarterly written report containing performance measurement attribution and analysis for each asset class and individual portfolios. The report should include a historical return analysis, dollar oriented analysis, return oriented (wealth relative) analysis, excess return analysis and risk/return analysis. Returns should be calculated for the following time periods: quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 15-year, 20-year, 25-year, 30-year, and since inception.
3. The CONSULTANT will be responsible for reconciling performance with both individual portfolio managers as well as the custodian bank on a monthly basis.
4. The CONSULTANT will be responsible for the creation of additional composites with historical returns, based on data availability, for those composites as requested by PSERS.
5. The CONSULTANT will provide quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 15-year, 20-year, 25-year, and 30-year quartile ranking reports of composite returns by Fund (i.e. Total Fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes), where peer data is available.
6. The CONSULTANT will provide consecutive year quartile ranking reports of composite returns by Fund (i.e. Total Fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes) for the past five years.
7. The CONSULTANT will provide a performance attribution analysis to determine the value added by investment policy, asset allocation, and security selection.
8. The CONSULTANT will provide reasonable assistance to PSERS in uploading the CONSULTANT's performance data to PSERS' own investment system(s).
9. The CONSULTANT will prepare ex-post risk statistics and analytics for the same time periods, to the degree of depth, including benchmark comparatives, and use

the same performance data from the above. Ex-post risk statistics and analytics should be robust and inclusive of industry best practices risk information.

- C. Consulting Services for the School Employees' Defined Contribution Trust (the "Trust").
1. The CONSULTANT will perform any of the following services, as may be requested:
 - a. Review each plan's existing investment options.
 - b. Determine if the investment options offered by each plan are optimum choices given the considerations for diversification, risk and return.
 - c. Recommend additions or deletions to investment options as needed.
 - d. Provide a recommended transition plan and timeline incorporating any proposed changes in investment options.
 - e. Conduct a review of each plan's pricing structure including fund management fees and terms between the plans and the third party administrator ("TPA").
 - f. Work with the TPA to review specific plan metrics, provide best practices and recommendations, and address issues that arise each quarter.
 - g. Assist in the development of investment policies for the plan.
 - h. Annually review general investment policy documents.
 - i. Periodically review goals, objective and best practices with PSERS' investment committee.
 - j. Recommend enhancements to PSERS' investment committee governance processes.
 - k. Perform periodic fiduciary training.
 - l. Monitor, review, and provide advice on legislative and regulatory issues.
 - m. Monitor, review, and provide advice regarding best practices.
 - n. Monitor, review, and provide advice regarding fiduciary obligations.
 - o. Provide ongoing review of strengths and vulnerabilities in current practices.

- p. Serve as the liaison between the record-keeper and PSERS to maximize the vendor relationship, resolve issues with the record-keeper, and ensure contractual commitments are met.
 - q. Lead and otherwise assist in any requisite RFP, RFQ, or RFI processes.
2. CONSULTANT acknowledges that such communications and/or requests concerning the Trust may come from either PSERS' investment professionals or members of PSERS' Executive Director's Office.

D. Terms and Conditions

1. The CONSULTANT's compensation for performing the above services shall be as set forth in the Purchase Order. The CONSULTANT acknowledges and agrees that no further fees are payable by PSERS for the services rendered under the Purchase Order.
2. The CONSULTANT shall hold the Commonwealth of Pennsylvania, the Board, PSERS, the Fund and the Trust, their beneficiaries, directors, officers, agents, and employees harmless from and indemnify the Commonwealth of Pennsylvania, the Board, PSERS, the Fund and the Trust, their beneficiaries, directors, officers, agents, and employees against any and all claims, demands, actions, or liability of any nature, including attorneys' fees and court costs, based upon or arising out of (a) any breach of this Agreement, (b) negligence, (c) fiduciary breach or (d) failure to comply with applicable law, in each case by or of the CONSULTANT, its directors, officers, employees, and agents under the Purchase Order and shall, at the request of PSERS, defend at the CONSULTANT's expense actions brought against the Commonwealth of Pennsylvania, the Board, PSERS and/or the Fund, based upon any such claims or demands, and the costs of such defense shall be borne by the CONSULTANT and shall not constitute any expense of, nor shall be paid out of, FUND, Board, PSERS or Commonwealth of Pennsylvania assets.
- a. In no event will either party be liable to the other party for incidental, consequential, special or punitive damages (including loss of profits, data, business or goodwill, or government fines, penalties, taxes or filing fees), regardless of whether such liability is based on breach of contract, tort, strict liability, breach of warranty, failure of essential purpose, statutory liability or otherwise, and even if advised of the likelihood of such damages.
3. PSERS acknowledges that the AON Tools is provided under the Purchase Order solely for PSERS' use. PSERS shall not provide any other organization with access to the AON Tools, or with reports or any other information obtained through it, except that PSERS may provide any asset manager who manages the Fund's or the Trust's assets with copies of reports that relate to the assets under management by that manager. Notwithstanding the foregoing, PSERS shall be authorized to provide access to and copies of the reports and any other information obtained

through the AON Tools and the services performed under the Purchase Order to the public and any other organization as may be required under the Right to Know Law and other similar laws. PSERS agrees that PSERS will not be granted any access to the Third Party Tools, or any copies of Third Party Tools, and PSERS shall not have any rights to use the Third Party Tools; provided, however, CONSULTANT shall utilize such Third Party Tools to perform the services, including the provision of reports and analyses to PSERS that are generated from such Third Party Tools.

The Purchase Order entitles PSERS to use as many copies of the AON Tools as it shall reasonably require during the term of the Purchase Order. CONSULTANT retains all title and ownership of the AON Tools, including the original disk copy and all subsequent copies of the AON Tools, regardless of the form or media in or on which the original and other copies may exist. The Purchase Order is not a sale of the original AON Tools or any copy.

CONSULTANT retains all title and ownership of the AON Tools and accompanying documentation, including the original disk copy and all subsequent copies of the AON Tools and documentation, regardless of the form or media in or on which the original and other copies may exist. PSERS agrees upon termination of the Purchase Order to return to CONSULTANT all software and portions and copies thereof, documentation and other equipment furnished with the service.

All reports prepared under the Purchase Order for PSERS shall become the property of PSERS.

CONSULTANT shall defend, at its expense, any action brought against PSERS arising out of any claim that PSERS' use of the services provided hereunder infringes upon the intellectual property rights of any third party; provided further that CONSULTANT shall indemnify and hold PSERS harmless against any and all damages and costs awarded against PSERS by final court order or fully executed settlement agreement. CONSULTANT will not indemnify PSERS, however, if the claim of infringement results from (i) the use of other than the most recent version of CONSULTANT information made available to PSERS by CONSULTANT; (ii) PSERS' alteration of the CONSULTANT information; (iii) use of any CONSULTANT information in combination with other software not provided by CONSULTANT; or (iv) use of CONSULTANT information not provided for or in a manner other than as expressly permitted in this Purchase Order.

The AON Tools and accompanying written materials (the "Documentation") are owned by CONSULTANT and are protected by United States copyright laws and international treaty provisions. Therefore, PSERS must treat the AON Tools and Documentation like any other copyrighted material. Unauthorized copying of the AON Tools, including AON Tools that has been modified, merged, or included with other software, or the Documentation is expressly forbidden. Subject to these

restrictions, PSERS may make a reasonable number of copies of the AON Tools solely for back-up purposes.

PSERS may not distribute copies of the AON Tools or Documentation to others, nor may PSERS rent or lease the AON Tools or the Documentation or transfer control of the AON Tools or Documentation to a third party without CONSULTANT's prior express written consent. In addition, PSERS may not modify, adapt, translate, reverse engineer, decompile, disassemble, or create derivative works based on the AON Tools without CONSULTANT's prior express written consent.

CONSULTANT warrants that (i) it has the right to provide PSERS with access to the AON Tools in accordance with the Purchase Order, and (ii) the AON Tools shall conform to the written documentation and shall operate in accordance with CONSULTANT's written representations to PSERS.

Neither party shall be liable to the other party for any loss, injury, delay, damages or other casualties suffered by the other due to strikes, riots, storms, fires, or acts of God or government, beyond the reasonable control of such party.

4. The CONSULTANT shall not enter into any agreement by or on behalf of PSERS that (i) is binding on PSERS or allows, either expressly or by operation of law, recourse to PSERS, and (ii) creates any actual or potential liability on the part of PSERS that exceeds the scope of authority delegated to the CONSULTANT under the Purchase Order, or (iii) waives any of PSERS' rights, defenses, causes of action, or immunities. Liabilities that are not authorized by PSERS and prohibited by this Subsection 4 include, without limitation, any obligation on the part of PSERS to indemnify a third party or to pay attorney fees, legal expenses, penalties, or liquidated damages.
5. The CONSULTANT or its parent shall maintain during the term of the Purchase Order a policy of errors and omissions insurance, with a limit of liability of at least \$10,000,000, to cover the CONSULTANT, its officers, and its affiliates to the extent any affiliate performs services under the Purchase Order. Unless otherwise approved by PSERS, the maximum deductible on the errors and omissions policy shall be no greater than \$1,000,000 or 10% of CONSULTANT's parent's retained earnings. The CONSULTANT shall submit a certificate of coverage evidencing the requirements set forth herein and additional documentation mutually agreed upon by PSERS and CONSULTANT, and PSERS shall cause to be issued a written determination on compliance. CONSULTANT shall thereafter maintain annual filings of current certificates of insurance with PSERS during the term of the Purchase Order and any extension thereof. PSERS may, in its discretion, require such changes with respect to insurance coverage as it deems appropriate for the protection of the PSERS' Fund by giving written notice of such changes to the CONSULTANT at least 30 days in advance of the effective date for such changes

AHIC will provide PSERS at least 30 days' prior written notice of any cancellation or material change of the errors and omissions insurance policy.

6. The CONSULTANT represents and confirms that it is duly registered and in good standing as an investment advisor under the Investment Advisers Act of 1940 or is exempt therefrom (and will maintain such registration or exemption). If registered pursuant to said Act, the CONSULTANT has furnished to PSERS Parts I and II of the CONSULTANT's current Form ADV filed with the Securities and Exchange Commission pursuant to Section 203(c) of the Investment Advisers Act of 1940.
7. The CONSULTANT confirms that over the past five years, neither it, nor any officer or principal, have been involved in any litigation or other legal proceedings, regulatory or other governmental investigation relating to CONSULTANT's investment or consulting activities, other than such that have already been disclosed to the BOARD.
8. The CONSULTANT shall notify PSERS immediately in the event that the CONSULTANT, or any officer or principal of the CONSULTANT, becomes involved in any litigation, or other legal proceedings, regulatory or other governmental investigations relating to the CONSULTANT'S investment or consulting activities, other than such that have already been disclosed to the BOARD.
9. The CONSULTANT confirms that neither it, nor any officer, director, partner, principal or employee have ever been the subject of any non-routine investigation, inquiry, or enforcement action by a governmental agency or self-regulatory body regarding fiduciary responsibilities, consulting activities, or other investment-related matters or activities, other than such that have already been disclosed to the BOARD.
10. The CONSULTANT shall notify PSERS immediately in the event that the CONSULTANT, or any officer, director, partner, principal or employee becomes the subject of any non-routine investigation, inquiry, or enforcement action by a governmental agency or self-regulatory body regarding fiduciary responsibilities, consulting activities, or other investment-related matters or activities, other than such that have already been disclosed to the BOARD.
11. The CONSULTANT shall report in writing to PSERS annually for each year of this Purchase Order any remuneration received from PSERS' external portfolio manager during the prior three (3) years.
12. The CONSULTANT shall perform its services under the Purchase Order as an independent contractor, and CONSULTANT acknowledges that it maintains Workers' Compensation Insurance and shall accept full responsibility for the payments of premiums for Workers' Compensation Insurance and Social Security,

as well as all income tax deductions and other taxes or payroll deductions required by law for itself for performing services specified by the Purchase Order.

13. The CONSULTANT shall provide immediate written notice to PSERS of any change in the CONSULTANT's status, including, without limitation, change in directors, officers, or employees who consult on PSERS' account; modification of the business organization; material change in SEC or other government or private registration, accreditation, or licensing; material deterioration of financial condition including but not limited to the filing of petition in bankruptcy; the CONSULTANT's awareness that its representations and warranties herein cease to be true; and, unless otherwise restricted by applicable law, litigation alleging the CONSULTANT's negligence or fraud.
14. The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services under the Purchase Order. CONSULTANT further covenants that, in the performance of the Purchase Order, it will not knowingly engage any other person having such interest.
15. It is agreed between the parties to the Purchase Order that the Purchase Order contemplates the rendition of expert professional services, and, therefore, neither the Purchase Order, nor any interest therein, nor any claim arising thereunder shall be transferred or assigned by either party to any other party or parties.
16. The performance of work under the Purchase Order may be terminated by the BOARD in whole or, from time to time. Any such termination shall be effected by delivery to the CONSULTANT of a written Notice of Termination specifying the extent to which performance of the work under the contract is terminated and the date on which such termination becomes effective. In the event of termination, fees for services shall be prorated and paid or repaid. Such termination shall not relieve CONSULTANT of any liability that may be incurred for its activities in connection with the Purchase Order prior to said termination. Likewise, CONSULTANT shall have the right to terminate the Purchase Order with thirty (30) days' written notice to PSERS. Also, under these circumstances, the fees for services shall be prorated and paid or repaid.
17. The CONSULTANT shall not publish or otherwise disclose, except to PSERS and except matters of public record, any information or data obtained hereunder from private individuals, organizations, or public agencies, in a publication whereby the information or data furnished by or about any particular person or establishment can be identified as relating to PSERS or its responsibilities, except with the consent of such person or establishment.
18. The CONSULTANT agrees that any specific plans, material, records, etc., developed under the Purchase Order remain the property of PSERS, and

reproduction or duplication of such materials may be done only with the approval of PSERS.

19. No member of the General Assembly of the Commonwealth of Pennsylvania or any individual employed by the Commonwealth shall be admitted to any share or part of the Purchase Order, or to any benefit that may arise therefrom, but this provision shall not be construed to extend to the Purchase Order if made with a corporation for its general benefit.
20. The CONSULTANT shall comply with the Standard Contract Terms and Conditions attached to the Purchase Order as Rider 4 and incorporated therein by reference, which provisions may be modified from time to time with written notice to CONSULTANT.
21. CONSULTANT shall maintain such records, books, and accounts pertaining to services and payments under the Purchase Order in accordance with generally accepted accounting principles consistently applied. All such records, books, and accounts shall be maintained and preserved during the term of the Purchase Order and any extension thereof and for four years thereafter. During such period, PSERS, or any other department or representative of the Commonwealth of Pennsylvania, from time to time upon reasonable notice, shall have the right to inspect, duplicate, and audit, at PSERS' expense, such records, books, and accounts for all purposes authorized and permitted by law. CONSULTANT may preserve such records, books, and accounts in original form or on microfilm, magnetic tape, or any other generally recognized and accepted process.
22. Any notice, demand, direction, instruction, or other communication required or permitted hereunder shall be confirmed in writing and shall be sufficiently given for all purposes when sent (a) by certified or registered U.S. mail, postage prepaid, (b) by a nationally recognized courier service that maintains verification of actual delivery, (c) by facsimile, with a copy sent by first class U.S. mail (provided that if the date of dispatch is not a working day, the facsimile shall be deemed to have been received at the opening of business of the addressee on the next working day), or (d) by delivering the same in person to any party at the following addresses or such other addresses as may be designated in writing from time to time by the parties:

PSERS: James H. Grossman, Jr,
Chief Investment Officer
Pennsylvania, Public School Employees'
Retirement System
5 North Fifth Street
Harrisburg, Pennsylvania 17101

CONSULTANT: David Testore,
Chief Administrative Officer

Aon Hewitt Investment Consulting, Inc.
10 South Riverside Plaza, Suite 1600
Chicago, IL 60606

23. PSERS reserves all immunities, defenses, rights, or actions arising out of its status as a sovereign entity or from the Eleventh Amendment to the United States Constitution. No provision of the Purchase Order shall be construed as a waiver of any such immunities, defenses, rights, or actions.
24. Execution of the Purchase Order constitutes certification by CONSULTANT that (a) the number appearing on the Purchase Order is CONSULTANT's correct taxpayer identification number, and (b) CONSULTANT is not subject to backup withholding because (i) CONSULTANT is exempt from backup withholding, (ii) CONSULTANT has not been notified by the IRS that it is subject to backup withholding as a result of a failure to report all interest or dividends, or (iii), the IRS has notified CONSULTANT that it is no longer subject to backup withholding.
25. The Purchase Order shall be governed by the laws of the Commonwealth of Pennsylvania and, for all purposes, shall be construed in accordance with said laws and the decisions of the courts of the Commonwealth of Pennsylvania therein, and shall be binding upon the successors and assigns of the parties thereto, and constitutes the entire agreement between PSERS and CONSULTANT with respect to the consulting services to be furnished as provided herein. No amendment or modification changing the scope or terms of the Purchase Order shall have any force or effect unless it is in writing and approved by both parties.
26. If any one or more of the covenants, agreements, provisions, or terms of the Purchase Order shall be held contrary to any express provision of law, or contrary to the policy of express law though not expressly prohibited, or against public policy, or shall for any reason whatsoever be held invalid, then such covenants, agreements, provisions, or terms shall be deemed severable from the remaining covenants, agreements, provisions, or terms of the Purchase Order and shall in no way affect the validity or enforceability of the remainder of the Purchase Order or the rights of the parties thereto.
27. CONSULTANT shall reimburse PSERS, or pay directly on PSERS' behalf, the reasonable travel expenses actually incurred by PSERS, if any, for each contract year (i) for travel to CONSULTANT's location for due diligence and/or to discuss performance results, economic outlook, investment strategy, organization changes and other pertinent matters and (ii) to attend investment conferences, training, seminars or similar events sponsored by CONSULTANT or any affiliate of CONSULTANT. Reimbursable or directly payable expenses shall include airfare, automobile rental, lodging, meals, CONSULTANT -sponsored meeting registration fees, and other travel-related expenses at maximum allowance rates established by the Commonwealth Management Directive 230.10 as revised, Travel and Subsistence Allowances. The reimbursable or directly payable expenses

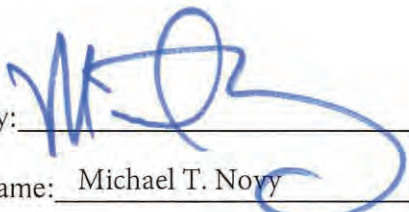
for each of (i) or (ii), above, shall not exceed \$25,000 per calendar year. PSERS shall submit a properly documented claim for reimbursement or direct payment of such travel expenses, which CONSULTANT shall pay within 30 days after receipt.

28. CONSULTANT shall perform services under the Purchase Order subject to the exercise of that degree of judgment and care under the circumstances then prevailing which persons of prudence, discretion, and intelligence who are experts in such matters, exercise in the management of like matters, not in regard to speculation but in regard to the permanent disposition of the Fund, considering the probable income to be derived therefrom as well as the probable safety of the invested capital. CONSULTANT acknowledges that it is a “fiduciary” with respect to PSERS and the Fund as that term is defined in the Employee Retirement Income Security Act of 1974 (ERISA), regardless of the applicability of ERISA to the Purchase Order.
29. TERMINATION FOR CONVENIENCE
 - a. PSERS shall have the right to terminate the Purchase Order for its convenience if PSERS determines termination to be in its best interest. CONSULTANT shall have the right to terminate the Purchase Order for its convenience upon 180 days’ written notice to PSERS. CONSULTANT shall be paid for work satisfactorily completed prior to the effective date of the termination, but in no event shall CONSULTANT be entitled to recover loss of profits.


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Authorized representatives of the parties have executed this Purchase Order Terms and Conditions as of the Effective Date.

Aon Hewitt Investment Consulting, Inc.

By: 
Name: Michael T. Novy
Title: VP-Legal
Date: August 21, 2019

**Commonwealth of Pennsylvania,
Public School Employees' Retirement
System**

By: 
Name: Glen R. Grell
Title: Executive Director
Date: 8/26/2019

By: 
Name: James H. Grossman, Jr.
Title: Chief Investment Officer
Date: 8/26/2019

REQUEST FOR PROPOSALS FOR
INVESTMENT CONSULTING SERVICES

ISSUING OFFICE

COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM (PSERS)
5 NORTH 5TH STREET
HARRISBURG, PA 17101

RFP NUMBER

PSERS RFP 2018-6

DATE OF ISSUANCE

January 18, 2019

**REQUEST FOR PROPOSALS FOR
Investment Consulting Services**

TABLE OF CONTENTS

CALENDAR OF EVENTS	iv
Part I—GENERAL INFORMATION	1
Part II—CRITERIA FOR SELECTION	9
Part III—TECHNICAL SUBMITTAL	13
Part IV – COST SUBMITTAL	32
Part V– SMALL DIVERSE BUSINESS AND SMALL BUSINESS PARTICIPATION SUBMITTAL	33
Part VI – CONTRACT TERMS AND CONDITIONS	37

APPENDICES

**APPENDIX A, SAMPLE PURCHASE ORDER TERMS AND CONDITIONS
INCLUDING PURCHASE ORDER TERMS AND CONDITIONS**

APPENDIX B, PROPOSAL COVER SHEET

APPENDIX C, DOMESTIC WORKFORCE UTILIZATION CERTIFICATION

APPENDIX D, IRAN FREE PROCUREMENT CERTIFICATION

**APPENDIX E, TRADE SECRET CONFIDENTIAL PROPRIETARY INFORMATION
NOTICE FORM**

APPENDIX F, COST SUBMITTAL

**APPENDIX G, SMALL DIVERSE BUSINESS AND SMALL BUSINESS
PARTICIPATION SUBMITTAL FORM**

APPENDIX H, SMALL DIVERSE AND SMALL BUSINESS LETTER OF INTENT

**APPENDIX I, MODEL FORM OF SMALL DIVERSE BUSINESS AND SMALL
BUSINESS SUBCONTRACT AGREEMENT**

APPENDIX J, PSERS' ASSET ALLOCATION AS OF JUNE 30, 2018.

CALENDAR OF EVENTS

The Commonwealth will make every effort to adhere to the following schedule:

Activity	Responsibility	Date
Deadline to submit Questions via email to Lenann Engler at lengler@pa.gov	Potential Offerors	1/25/2019
Pre-proposal Conference—Location.	Issuing Office/Potential Offerors	None
Answers to Potential Offeror questions posted to eMarketplace at http://www.emarketplace.state.pa.us/Search.aspx no later than this date.	Issuing Office	2/1/2019
Please monitor website for all communications regarding the RFP.	Potential Offerors	Ongoing
Sealed proposal must be received by the Issuing Office at Public School Employees' Retirement System ATTN: Cathy Gusler 5 North 5 th Street Harrisburg, PA 17101	Offerors	2/19/2019
Finalist presentations at PSERS' Headquarters if necessary. Bidders should be available to present in person if requested.	Selected Offerors	3/11/2019-3/15/2019

PART I

GENERAL INFORMATION

- I-1. Purpose.** This request for proposals (“RFP”) provides to those interested in submitting proposals for the subject procurement (“Offerors”) sufficient information to enable them to prepare and submit proposals for the Public School Employees’ Retirement System’s (“PSERS”) consideration on behalf of the Commonwealth of Pennsylvania (“Commonwealth”) to satisfy a need for Investment Consulting Services (“Project”). This RFP contains instructions governing the requested proposals, including the requirements for the information and material to be included; a description of the service to be provided; requirements which Offerors must meet to be eligible for consideration; general evaluation criteria; and other requirements specific to this RFP.
- I-2. Issuing Office.** PSERS (“Issuing Office”) has issued this RFP on behalf of the Commonwealth. The sole point of contact in the Commonwealth for this RFP shall be Lenann T. Engler, Manager of Investment Processes, PSERS, 5 North 5th Street, Harrisburg, PA 17101, **Lengler@pa.gov**, the Issuing Officer for this RFP. Please refer all inquiries to the Issuing Officer.
- I-3. Overview of Project.** PSERS is the administrator of a cost-sharing multiple-employer defined benefit retirement system (the “Defined Benefit Plan”) established by the Commonwealth to provide pension benefits for employees of the public school system in the Commonwealth. PSERS’ funding policy provides for periodic member contributions at statutory rates and periodic employer contributions at actuarially determined rates that are sufficient to accumulate assets to pay defined benefits when due. The Public School Employees’ Retirement Fund (“Fund”) consists of all monies of the Defined Benefit Plan. As provided by statutes, the PSERS’ Board of Trustees (“Board”) has exclusive control and management responsibility of the Fund and full power to invest the Fund. In exercising its fiduciary responsibility to PSERS’ membership, the Board is governed by the “prudent investor” rule and has adopted an Investment Policy Statement to formally document investment objectives and responsibilities. This policy, as well as applicable state law, defines permissible investments for PSERS. The Investment Policy Statement, Objectives, and Guidelines can be obtained on the internet at <http://www.psers.pa.gov/About/Investment/Pages/Guide.aspx>.

The market value of PSERS’ net assets in the Fund totaled approximately \$56.7 billion as of June 30, 2018. Based on this valuation of its assets, PSERS is the 15th largest defined benefit public pension fund in the nation. A copy of the Fund’s most recent comprehensive annual financial report can be obtained on the internet at <http://www.psers.pa.gov> under the Forms & Publications section. The Board needs investment consulting and performance measurement services to fulfill its fiduciary duties with respect to the PSERS’ fund.

In addition, on June 12, 2017, Governor Wolf signed Act 5 of 2017 into law. This pension legislation represents a substantial change to PSERS’ operations and made significant changes to PSERS benefit structure for future members. School employees who become new members of PSERS on July 1, 2019 and thereafter will choose one of three new retirement plan options for their retirement benefits. The new plan design options include two hybrid plans consisting of defined benefit and defined contribution components and a stand-alone defined contribution plan (the defined contribution components thereof, the “Defined Contribution Plan”). The School Employees’ Defined Contribution Trust (“Trust”) will consist of all monies of the Defined Contribution Plan. The Board will be the trustee (“Trustee”) of the Trust. The current stand-alone defined benefit plan will no longer be available to new members after June 30, 2019. As Trustee of the Trust, the Board will need the services detailed in this RFP relating to the Trust.

I-4.Objectives.

A. General. The purpose of this RFP is to obtain the service or services of an offeror or offerors to provide investment consulting and/or performance evaluation services for all PSERS' asset classes.

B. Specific. Additional detail is provided in Part III of this RFP.

- I-5. Type of Contract.** It is proposed that if the Issuing Office enters into a contract as a result of this RFP, it will be a fixed-fee contract purchase order containing the Standard Contract Terms and Conditions as shown in **Part VI** and the terms and conditions contained in **Appendix A**. The Issuing Office, in its sole discretion, may undertake negotiations with Offerors whose proposals, in the judgment of the Issuing Office, show them to be qualified, responsible and capable of performing the Project.
- I-6. Rejection of Proposals.** The Issuing Office reserves the right, in its sole and complete discretion, to reject any proposal received as a result of this RFP.
- I-7. Incurring Costs.** The Issuing Office is not liable for any costs the Offeror incurs in preparation and submission of its proposal, in participating in the RFP process or in anticipation of award of the contract.
- I-8. Pre-proposal Conference.** **There will be no Pre-proposal conference for this RFP. If there are any questions, please forward them to the Issuing Officer in accordance with Section I-9.**
- I-9. Questions & Answers.** If an Offeror has any questions regarding this RFP, the Offeror must submit the questions by email (**with the subject line "RFP PSERS RFP 2018-6 Question"**) to the Issuing Officer named in **Part I, Section I-2** of the RFP. If the Offeror has questions, they must be submitted via email **no later than** the date indicated on the Calendar of Events. The Offeror shall not attempt to contact the Issuing Officer by any other means. The Issuing Officer shall post the answers to the questions on eMarketplace by the date stated on the Calendar of Events. An Offeror who submits a question *after* the deadline date for receipt of questions indicated on the Calendar of Events assumes the risk that its proposal will not be responsive or competitive because the Commonwealth is not able to respond before the proposal receipt date or in sufficient time for the Offeror to prepare a responsive or competitive proposal. When submitted after the deadline date for receipt of questions indicated on the Calendar of Events, the Issuing Officer *may* respond to questions of an administrative nature by directing the questioning Offeror to specific provisions in the RFP. To the extent that the Issuing Office decides to respond to a non-administrative question *after* the deadline date for receipt of questions indicated on the Calendar of Events, the answer must be provided to all Offerors through an addendum.

All questions and responses as posted on eMarketplace are considered as an addendum to, and part of, this RFP in accordance with RFP **Part I, Section I-10**. Each Offeror shall be responsible to monitor eMarketplace for new or revised RFP information. The Issuing Office shall not be bound by any verbal information nor shall it be bound by any written information that is not either contained within the RFP or formally issued as an addendum by the Issuing Office. The Issuing Office does not consider questions to be a protest of the specifications or of the solicitation. The required protest process for Commonwealth procurements is as described in **Part I, Section I-26**.

- I-10. Addenda to the RFP.** If the Issuing Office deems it necessary to revise any part of this RFP before the proposal response date, the Issuing Office will post an addendum to eMarketplace at <http://www.emarketplace.state.pa.us/Search.aspx>. It is the Offeror's responsibility to periodically

check eMarketplace for any new information or addenda to the RFP. Answers to the questions asked during the Questions & Answers period also will be posted to eMarketplace as an addendum to the RFP.

I-11. Response Date. To be considered for selection, hard copies of proposals must arrive at the Issuing Office on or before the time and date specified in the RFP Calendar of Events. The Issuing Office will **not** accept proposals via email or facsimile transmission. Offerors who send proposals by mail or other delivery service should allow sufficient delivery time to ensure timely receipt of their proposals. If, due to inclement weather, natural disaster, or any other cause, the Commonwealth office location to which proposals are to be returned is closed on the proposal response date, the deadline for submission will be automatically extended until the next Commonwealth business day on which the office is open, unless the Issuing Office otherwise notifies Offerors. The hour for submission of proposals shall remain the same. The Issuing Office will reject, unopened, any late proposals.

I-12. Proposal Requirements.

A. Proposal Submission: To be considered, Offerors should submit a complete response to this RFP to the Issuing Office, using the format provided in **Section I-12B**, providing **fifteen (15) paper copies [one marked “ORIGINAL”] of the Technical Submittal and one (1) paper copy of the Cost Submittal and two (2) paper copies of the Small Diverse Business and Small Business (SDB/SB) Participation Submittal and related Letter(s) of Intent.** In addition to the paper copies of the proposal, Offerors shall submit one **complete and exact** copy of the entire proposal (Technical, Cost and SDB/SB submittals, along with all requested documents) on CD-ROM or Flash drive in Microsoft Office or Microsoft Office-compatible format. The electronic copy must be a mirror image of the paper copy and any spreadsheets must be in Microsoft Excel. The Offerors may not lock or protect any cells or tabs. The CD or Flash drive should clearly identify the Offeror and include the name and version number of the virus scanning software that was used to scan the CD or Flash drive before it was submitted. The Offeror shall make no other distribution of its proposal to any other Offeror or Commonwealth official or Commonwealth consultant. Each proposal page should be numbered for ease of reference. An official authorized to bind the Offeror to its provisions must sign the proposal. If the official signs the **Proposal Cover Sheet (Appendix B** to this RFP) and the Proposal Cover Sheet is attached to the Offeror’s proposal, the requirement will be met. For this RFP, the proposal must remain valid for **120** days or until a contract is fully executed. If the Issuing Office selects the Offeror’s proposal for award, the contents of the selected Offeror’s proposal will become, except to the extent the contents are changed through Best and Final Offers or negotiations, contractual obligations.

Each Offeror submitting a proposal specifically waives any right to withdraw or modify it, except that the Offeror may withdraw its proposal by written notice received at the Issuing Office’s address for proposal delivery prior to the exact hour and date specified for proposal receipt. An Offeror or its authorized representative may withdraw its proposal in person prior to the exact hour and date set for proposal receipt, provided the withdrawing person provides appropriate identification and signs a receipt for the proposal. An Offeror may modify its submitted proposal prior to the exact hour and date set for proposal receipt only by submitting a new clearly identified revised sealed proposal or sealed modification which complies with the RFP requirements.

B. Proposal Format: Offerors must submit their proposals in the format, including heading descriptions, outlined below. To be considered, the proposal must respond to all proposal requirements. Offerors should provide any other information thought to be relevant, but not applicable to the enumerated categories, as an appendix to the Proposal. All cost data relating to this proposal and all Small Diverse Business and Small Business cost data should be kept separate from

and not included in the Technical Submittal. Offerors should not reiterate technical information in the cost submittal. Each Proposal shall consist of the following **three** separately sealed submittals:

1. Technical Submittal, in response to **Part III**:
 - a. Complete, sign and include **Appendix C – Domestic Workforce Utilization Certification**
 - b. Complete, sign and include **Appendix D – Iran Free Procurement Certification**;
2. Cost Submittal, in response to RFP **Part IV**; and
3. Small Diverse Business and Small Business (SDB/SB) Participation Submittal, in response to RFP **Part V**:
 - a. Complete and include **Appendix G - SDB/SB Participation Submittal Form**; and
 - b. Complete and include **Appendix H - SDB/SB Letter of Intent**. Offeror must provide a Letter of Intent for each SDB and SB listed on the SDB/SB Participation Submittal Form

The Issuing Office reserves the right to request additional information which, in the Issuing Office's opinion, is necessary to assure that the Offeror's competence, number of qualified employees, business organization, and financial resources are adequate to perform according to the RFP.

The Issuing Office may make investigations as deemed necessary to determine the ability of the Offeror to perform the Project, and the Offeror shall furnish to the Issuing Office all requested information and data. The Issuing Office reserves the right to reject any proposal if the evidence submitted by, or investigation of, such Offeror fails to satisfy the Issuing Office that such Offeror is properly qualified to carry out the obligations of the RFP and to complete the Project as specified.

- I-13. Economy of Preparation.** Offerors should prepare proposals simply and economically, providing a straightforward, concise description of the Offeror's ability to meet the requirements of the RFP.
- I-14. Alternate Proposals.** The Issuing Office has identified the basic approach to meeting its requirements, allowing Offerors to be creative and propose their best solution to meeting these requirements. The Issuing Office will not accept alternate proposals.
- I-15. Discussions for Clarification.** Offerors may be required to make an oral or written clarification of their proposals to the Issuing Office to ensure thorough mutual understanding and Offeror responsiveness to the solicitation requirements. The Issuing Office will initiate requests for clarification. Clarifications may occur at any stage of the evaluation and selection process prior to contract execution.
- I-16. Prime Contractor Responsibilities.** The selected Offeror must perform at least 50% of the total contract value. Nevertheless, the contract will require the selected Offeror to assume responsibility for all services offered in its proposal whether it produces them itself or by subcontract. Further, the Issuing Office will consider the selected Offeror to be the sole point of contact with regard to contractual matters.
- I-17. Proposal Contents.**

- A. Confidential Information.** The Commonwealth is not requesting, and does not require, confidential proprietary information or trade secrets to be included as part of Offerors' submissions in order to evaluate proposals submitted in response to this RFP. Accordingly, except as provided herein, Offerors should not label proposal submissions as confidential or proprietary or trade secret protected. Any Offeror who determines that it must divulge such information as part of its proposal must submit the signed written statement described in subsection c. below and must additionally provide a redacted version of its proposal on CD, which removes only the confidential proprietary information and trade secrets, for required public disclosure purposes. The CD should clearly identify the Offeror, note that it is a redacted copy and include the name and version number of the virus scanning software that was used to scan the CD before it was submitted. If a written statement and redacted version of the proposal is not submitted at the time of the proposal submission, the proposal will be subject to release as submitted with only financial capability redacted.
- B. Commonwealth Use.** All material submitted with the proposal shall be considered the property of the Commonwealth of Pennsylvania and may be returned only at the Issuing Office's option. The Commonwealth has the right to use any or all ideas not protected by intellectual property rights that are presented in any proposal regardless of whether the proposal becomes part of a contract. Notwithstanding any Offeror copyright designations contained on proposals, the Commonwealth shall have the right to make copies and distribute proposals internally and to comply with public record or other disclosure requirements under the provisions of any Commonwealth or United States statute or regulation, or rule or order of any court of competent jurisdiction.
- C. Public Disclosure.** After the award of a contract pursuant to this RFP, all proposal submissions are subject to disclosure in response to a request for public records made under the Pennsylvania Right-to-Know-Law, 65 P.S. § 67.101, et seq. If a proposal submission contains confidential proprietary information or trade secrets, a signed written statement to this effect must be provided with the submission in accordance with 65 P.S. § 67.707(b) for the information to be considered exempt under 65 P.S. § 67.708(b)(11) from public records requests. Refer to **Appendix E** of the RFP for a **Trade Secret Confidential Proprietary Information Notice Form** that may be utilized as the signed written statement, if applicable. If financial capability information is submitted in response to Part III of this RFP such financial capability information is exempt from public records disclosure under 65 P.S. § 67.708(b)(26).

I-18. Best and Final Offers.

- A.** While not required, the Issuing Office reserves the right to conduct discussions with Offerors for the purpose of obtaining "best and final offers." To obtain best and final offers from Offerors, the Issuing Office may do one or more of the following, in any combination and order:
1. Schedule oral presentations;
 2. Request revised proposals;
 3. Conduct an online auction; and
 4. Enter into pre-selection negotiations.
- B.** The following Offerors will **not** be invited by the Issuing Office to submit a Best and Final Offer:

1. Those Offerors, which the Issuing Office has determined to be not responsible or whose proposals the Issuing Office has determined to be not responsive.
2. Those Offerors, which the Issuing Office has determined in accordance with **Part II, Section II-5**, from the submitted and gathered financial and other information, do not possess the financial capability, experience or qualifications to assure good faith performance of the contract.
3. Those Offerors whose score for their technical submittal of the proposal is less than 75% of the total amount of technical points allotted to the technical criterion.

The issuing office may further limit participation in the best and final offers process to those remaining responsible offerors which the Issuing Office has, within its discretion, determined to be within the top competitive range of responsive proposals.

- C. The Evaluation Criteria found in **Part II, Section II-4**, shall also be used to evaluate the Best and Final offers.
 - D. Price reductions offered through any online auction shall have no effect upon the Offeror's Technical Submittal.
 - E. Any reduction to commitments to Small Diverse Businesses and Small Businesses must be proportional to the reduction in the total price offered through any BAFO process or contract negotiations unless approved by BDISBO.
- I-19. News Releases.** Offerors shall not issue news releases, Internet postings, advertisements or any other public communications pertaining to this Project without prior written approval of the Issuing Office, and then only in coordination with the Issuing Office.
- I-20. Restriction of Contact.** From the issue date of this RFP until the Issuing Office selects a proposal for award, the Issuing Officer is the sole point of contact concerning this RFP. Any violation of this condition may be cause for the Issuing Office to reject the offending Offeror's proposal. If the Issuing Office later discovers that the Offeror has engaged in any violations of this condition, the Issuing Office may reject the offending Offeror's proposal or rescind its contract award. Offerors must agree not to distribute any part of their proposals beyond the Issuing Office. An Offeror who shares information contained in its proposal with other Commonwealth personnel and/or competing Offeror personnel may be disqualified.
- I-21. Issuing Office Participation.** Offerors shall provide all services, supplies, facilities, and other support necessary to complete the identified work, except as otherwise provided in this **Part I, Section I-21**.
- I-22. Term of Contract.** The term of the contract will commence on the Effective Date and will end five years after the Effective Date. The Issuing Office will fix the Effective Date after the contract has been fully executed by the selected Offeror and by the Commonwealth and all approvals required by Commonwealth contracting procedures have been obtained. The selected Offeror shall not start the performance of any work prior to the Effective Date of the contract and the Commonwealth shall not be liable to pay the selected Offeror for any service or work performed or expenses incurred before the Effective Date of the contract.
- I-23. Offeror's Representations and Authorizations.** By submitting its proposal, each Offeror understands, represents, and acknowledges that:

- A. All of the Offeror's information and representations in the proposal are material and important, and the Issuing Office may rely upon the contents of the proposal in awarding the contract(s). The Commonwealth shall treat any misstatement, omission or misrepresentation as fraudulent concealment of the true facts relating to the Proposal submission, punishable pursuant to 18 Pa. C.S. §4904.
- B. The Offeror has arrived at the price(s) and amounts in its proposal independently and without consultation, communication, or agreement with any other Offeror or potential offeror.
- C. The Offeror has not disclosed the price(s), the amount of the proposal, nor the approximate price(s) or amount(s) of its proposal to any other firm or person who is an Offeror or potential offeror for this RFP, and the Offeror shall not disclose any of these items on or before the proposal submission deadline specified in the Calendar of Events of this RFP.
- D. The Offeror has not attempted, nor will it attempt, to induce any firm or person to refrain from submitting a proposal on this contract, or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal or other form of complementary proposal.
- E. The Offeror makes its proposal in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal.
- F. To the best knowledge of the person signing the proposal for the Offeror, the Offeror, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last **four** years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding or proposing on any public contract, except as the Offeror has disclosed in its proposal.
- G. To the best of the knowledge of the person signing the proposal for the Offeror and except as the Offeror has otherwise disclosed in its proposal, the Offeror has no outstanding, delinquent obligations to the Commonwealth including, but not limited to, any state tax liability not being contested on appeal or other obligation of the Offeror that is owed to the Commonwealth.
- H. The Offeror is not currently under suspension or debarment by the Commonwealth, any other state or the federal government, and if the Offeror cannot so certify, then it shall submit along with its proposal a written explanation of why it cannot make such certification.
- I. The Offeror has not made, under separate contract with the Issuing Office, any recommendations to the Issuing Office concerning the need for the services described in its proposal or the specifications for the services described in the proposal.
- J. Each Offeror, by submitting its proposal, authorizes Commonwealth agencies to release to the Commonwealth information concerning the Offeror's Pennsylvania taxes, unemployment compensation and workers' compensation liabilities.
- K. Until the selected Offeror receives a fully executed and approved written contract from the Issuing Office, there is no legal and valid contract, in law or in equity, and the Offeror shall not begin to perform.

- L. The Offeror is not currently engaged, and will not during the duration of the contract engage, in a boycott of a person or an entity based in or doing business with a jurisdiction which the Commonwealth is not prohibited by Congressional statute from engaging in trade or commerce.

I-24. Notification of Selection.

- A. **Contract Negotiations.** The Issuing Office will notify all Offerors in writing of the Offeror selected for contract negotiations after the Issuing Office has determined, taking into consideration all of the evaluation factors, the proposal that is the most advantageous to the Issuing Office.
- B. **Award.** Offerors whose proposals are not selected will be notified when contract negotiations have been successfully completed and the Issuing Office has received the final negotiated contract signed by the selected Offeror.

I-25. Debriefing Conferences. Upon notification of award, Offerors whose proposals were not selected will be given the opportunity to be debriefed. The Issuing Office will schedule the debriefing at a mutually agreeable time. The debriefing will not compare the Offeror with other Offerors, other than the position of the Offeror's proposal in relation to all other Offeror proposals. An Offeror's exercise of the opportunity to be debriefed does not constitute nor toll the time for filing a protest (See **Section I-26** of this RFP).

I-26. RFP Protest Procedure. The RFP Protest Procedure is on the DGS website at <http://www.dgs.pa.gov/Documents/Procurement%20Forms/Handbook/Pt1/Pt%20I%20Ch%2058%20Bid%20Protests.pdf>. A protest by a party that has not or has not yet submitted a proposal must be filed no later than the proposal submission deadline specified in the Calendar of Events of the RFP. Offerors may file a protest within **seven** days after the protesting Offeror knew or should have known of the facts giving rise to the protest, but in no event may an Offeror file a protest later than **seven** days after the date the notice of award of the contract is posted on the DGS website. The date of filing is the date of receipt of the protest. A protest must be filed in writing with the Issuing Office. To be timely, the protest must be received by 4:00 p.m. on the seventh day.

I-27. Use of Electronic Versions of this RFP. This RFP is being made available by electronic means. If an Offeror electronically accepts the RFP, the Offeror acknowledges and accepts full responsibility to ensure that no changes are made to the RFP. In the event of a conflict between a version of the RFP in the Offeror's possession and the Issuing Office's version of the RFP, the Issuing Office's version shall govern.

PART II

CRITERIA FOR SELECTION

- II-1. Mandatory Responsiveness Requirements.** To be eligible for selection, a proposal must:
- A. Be timely received from an Offeror (see **Part I, Section I-11**); and
 - B. Be properly signed by the Offeror (see **Part I, Section I-12A**).
 - C. Meet all of the Mandatory Minimum Qualifications outlined in Section III-4 (see Part III, Section III-4).
- II-2. Technical Nonconforming Proposals.** The three (3) Mandatory Responsiveness Requirements set forth in **Section II-1** above (A-C) are the only RFP requirements that the Commonwealth will consider to be *non-waivable*. The Issuing Office reserves the right, in its sole discretion, to (1) waive any other technical or immaterial nonconformities in an Offeror's proposal, (2) allow the Offeror to cure the nonconformity, or (3) consider the nonconformity in the scoring of the Offeror's proposal.
- II-3. Evaluation.** The Issuing Office has selected a committee of qualified personnel to review and evaluate timely submitted proposals. Independent of the committee, BDISBO will evaluate the Small Diverse Business and Small Business Participation Submittal and provide the Issuing Office with a rating for this component of each proposal. The Issuing Office will notify in writing of its selection for negotiation the responsible Offeror whose proposal is determined to be the most advantageous to the Commonwealth as determined by the Issuing Office after taking into consideration all of the evaluation factors.
- II-4. Evaluation Criteria.** The following criteria will be used in evaluating each proposal:
- A. **Technical:** The Issuing Office has established the weight for the Technical criterion for this RFP as **70%** of the total points. Evaluation will be based upon the following in order of importance: **Personnel Qualification, Soundness of Approach, Offeror Qualification, Understanding the Problem.** The final Technical scores are determined by giving the maximum number of technical points available to the proposal with the highest raw technical score. The remaining proposals are rated by applying the Technical Scoring Formula set forth at the following webpage:
<http://www.dgs.pa.gov/Businesses/Materials%20and%20Services%20Procurement/Procurement-Resources/Pages/default.aspx>.
 - B. **Cost:** The Issuing Office has established the weight for the Cost criterion for this RFP as **10%** of the total points. The cost criterion is rated by giving the proposal with the lowest total cost the maximum number of Cost points available. The remaining proposals are rated by applying the Cost Formula set forth at the following webpage:
<http://www.dgs.pa.gov/Businesses/Materials%20and%20Services%20Procurement/Procurement-Resources/Pages/default.aspx>.
 - C. **Small Diverse Business and Small Business Participation:** BDISBO has established the minimum evaluation weight for the Small Diverse Business and Small Business Participation criterion for this RFP as **20%** of the total points.
 - 1. The Small Diverse and Small Business point allocation is based entirely on the percentage of the contract cost committed to Small Diverse Businesses and Small Businesses.

2. A total combined SDB/SB commitment less than one percent (1%) of the total contract cost is considered de minimis and will receive no Small Diverse Business or Small Business points.
3. Based on a maximum total of 200 available points for the Small Diverse Business and Small Business Participation Submittal, the scoring mechanism is as follows:

Small Diverse Business and Small Business Raw Score =

$$200 (\text{SDB}\% + (1/3 * \text{SB } \%))$$

4. The Small Diverse Business and Small Business Raw Score is capped at 200.
 5. The Offeror with the highest raw score will receive 200 points. Each Offeror's raw score will be pro-rated against the Highest Offeror's raw score by applying the formula set forth on the following webpage:
http://www.dgs.pa.gov/Businesses/Materials%20and%20Services%20Procurement/Procurement-Resources/Pages/RFP_SCORING_FORMULA.aspx.
 6. The Offeror's prior performance in meeting its contractual obligations to Small Diverse Businesses and Small Businesses will be considered by BDISBO during the scoring process. To the extent the Offeror has failed to meet prior contractual commitments, BDISBO may recommend to the Issuing Office that the Offeror be determined non-responsible for the limited purpose of eligibility to receive Small Diverse Business and Small Business points.
- D. Domestic Workforce Utilization:** Any points received for the Domestic Workforce Utilization criterion are bonus points in addition to the total points for this RFP. The maximum amount of bonus points available for this criterion is 3% of the total points for this RFP.

To the extent permitted by the laws and treaties of the United States, each proposal will be scored for its commitment to use domestic workforce in the fulfillment of the contract. Maximum consideration will be given to those Offerors who will perform the contracted direct labor exclusively within the geographical boundaries of the United States or within the geographical boundaries of a country that is a party to the World Trade Organization Government Procurement Agreement. Those who propose to perform a portion of the direct labor outside of the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement will receive a correspondingly smaller score for this criterion. See the following webpage for the Domestic Workforce Utilization Formula:

http://www.dgs.pa.gov/Businesses/Materials%20and%20Services%20Procurement/Procurement-Resources/Pages/RFP_SCORING_FORMULA.aspx.

- E. Iran Free Procurement Certification and Disclosure.** Prior to entering a contract worth at least \$1,000,000 or more with a Commonwealth entity, an offeror must: a) certify it is not on the current list of persons engaged in investment activities in Iran created by the Pennsylvania Department of General Services ("DGS") pursuant to Section 3503 of the Procurement Code and is eligible to contract with the Commonwealth under Sections 3501-3506 of the Procurement Code; or b) demonstrate it has received an exception from the certification requirement for that solicitation or

contract pursuant to Section 3503(e). All offerors must complete and return the Iran Free Procurement Certification form, (**Appendix D, Iran Free Procurement Certification Form**), which is attached hereto and made part of this RFP. The completed and signed Iran Free Procurement Certification form must be submitted as part of the Technical Submittal.

See the following web page for current Iran Free Procurement list:

<http://www.dgs.pa.gov/businesses/materials%20and%20services%20procurement/procurement-resources/pages/default.aspx#.WDNfJJgo6Ht>

II-5. Offeror Responsibility. To be responsible, an Offeror must submit a responsive proposal and possess the capability to fully perform the contract requirements in all respects and the integrity and reliability to assure good faith performance of the contract.

In order for an Offeror to be considered responsible for this RFP and therefore eligible for selection for best and final offers or selection for contract negotiations:

- A. The total score for the technical submittal of the Offeror's proposal must be greater than or equal to **75% of the available technical points; and**
- B. The Offeror's financial information must demonstrate that the Offeror possesses the financial capability to assure good faith performance of the contract. The Issuing Office will review the Offeror's previous three financial statements, any additional information received from the Offeror, and any other publicly-available financial information concerning the Offeror, and assess each Offeror's financial capacity based on calculating and analyzing various financial ratios, and comparison with industry standards and trends.

An Offeror which fails to demonstrate sufficient financial capability to assure good faith performance of the contract as specified herein may be considered by the Issuing Office, in its sole discretion, for Best and Final Offers or contract negotiation contingent upon such Offeror providing contract performance security for the first contract year cost proposed by the Offeror in a form acceptable to the Issuing Office. Based on the financial condition of the Offeror, the Issuing Office may require a certified or bank (cashier's) check, letter of credit, or a performance bond conditioned upon the faithful performance of the contract by the Offeror. The required performance security must be issued or executed by a bank or surety company authorized to do business in the Commonwealth. The cost of the required performance security will be the sole responsibility of the Offeror and cannot increase the Offeror's cost proposal or the contract cost to the Commonwealth.

Further, the Issuing Office will award a contract only to an Offeror determined to be responsible in accordance with the most current version of Commonwealth Management Directive 215.9, Contractor Responsibility Program.

II-6. Final Ranking and Award.

- A. After any best and final offer process conducted, the Issuing Office will combine the evaluation committee's final technical scores, BDISBO's final Small Diverse Business and Small Business Participation Submittal scores, the final cost scores, and (when applicable) the domestic workforce utilization scores, in accordance with the relative weights assigned to these areas as set forth in this Part.

- B.** The Issuing Office will rank responsible offerors according to the total overall score assigned to each, in descending order.
- C.** The Issuing Office must select for contract negotiations the offeror with the highest overall score.
- D.** The Issuing Office has the discretion to reject all proposals or cancel the request for proposals, at any time prior to the time a contract is fully executed, when it is in the best interests of the Commonwealth. The reasons for the rejection or cancellation shall be made part of the contract file.

PART III

TECHNICAL SUBMITTAL

PSERS is the administrator of a cost-sharing multiple-employer defined benefit retirement system (the “Defined Benefit Plan”) established by the Commonwealth of Pennsylvania to provide pension benefits for employees of the public school system in the Commonwealth. PSERS’ funding policy provides for periodic member contributions at statutory rates and periodic employer contributions at actuarially determined rates that are sufficient to accumulate assets to pay defined benefits when due. The Public School Employees’ Retirement Fund consists of all monies of the Defined Benefit Plan. As provided by statutes, the Board has exclusive control and management responsibility of PSERS’ Fund and full power to invest the Fund. In exercising its fiduciary responsibility to PSERS’ membership, the Board is governed by the “prudent investor” rule and has adopted an Investment Policy Statement to formally document investment objectives and responsibilities. This policy, as well as applicable state law, defines permissible investments for PSERS. The Investment Policy Statement, Objectives, and Guidelines can be obtained on the internet at <http://www.psers.pa.gov/About/Investment/Pages/Guide.aspx>.

The market value of PSERS’ net assets in the Fund totaled approximately \$56.7 billion as of June 30, 2018. Based on this valuation of its assets, PSERS is the 15th largest defined benefit public pension fund in the nation. A copy of the Fund’s most recent comprehensive annual financial report can be obtained on the internet at <http://www.psers.pa.gov> under the Forms & Publications section. The Board needs investment consulting and performance measurement services to fulfill its fiduciary duties with respect to the Fund.

In addition, on June 12, 2017, Pennsylvania Governor Tom Wolf signed Act 5 of 2017 into law. This pension legislation represents a substantial change to PSERS’ operations and made significant changes to PSERS’ benefit structure for future members. School employees who become new members of PSERS on July 1, 2019 and thereafter will choose one of three new retirement plan options for their retirement benefits. The new plan design options include two hybrid plans consisting of defined benefit and defined contribution components and a stand-alone defined contribution plan (such defined contribution components, the “Defined Contribution Plan”). The School Employees’ Defined Contribution Trust (“Trust”) consists of all monies of the Defined Contribution Plan. The Board is the trustee (“Trustee”) of the Trust. Defined contribution monies are self-directed by the retirement system members. The current stand-alone defined benefit plan will no longer be available to new members after June 30, 2019. As Trustee of the Trust, the Board needs the services detailed in this RFP relating to the Trust. Such services will begin on the later of July 1, 2019 or upon execution of a contract for investment consulting services between PSERS and the successful bidder.

III-1. Requested Services: Fund

The contractor will provide non-discretionary investment consulting and/or performance measurement services for the period June 1, 2019 through May 31, 2024.

A. In providing Consulting Services for the Fund, and for all major asset classes, the consultant will:

1. Conduct a comprehensive review and analysis of investment objectives, policies, asset allocation, and portfolio structure, inclusive of defining an investable risk beta portfolio, and recommend changes, if appropriate.

2. Review the adequacy of PSERS' Investment Professionals and resources, and make recommendations on PSERS' Investment Professionals and resource changes, if any.
3. Work with PSERS' Investment Professionals and the actuary to conduct an asset/liability study annually for each calendar year and present the results to the Board in March of the following year.
4. Work with PSERS' Investment Professionals to develop an appropriate investment management structure for the Fund and each asset class that considers the role of active versus passive strategies, investment management styles, and separation of alpha from beta under different market conditions.
5. Recommend appropriate performance and risk benchmarks for individual portfolios, each asset class, and for the total Fund.
6. Review and make recommendations regarding individual portfolio risk guidelines at least annually.
7. Recommend suitable investment opportunities and practical implementation methods; research supporting such recommendations must have been completed within the prior 12 months.
8. Recommend appropriate investment strategies, tactics, procedures, and practices.
9. Provide research reports on asset allocation, investment issues, and provide description and evaluation of alternative approaches.
10. Provide information on market conditions and explain their impact on the Fund's investments.
11. Provide PSERS with information on high conviction new managers at the earliest possible juncture to permit PSERS to secure capacity and negotiate terms with promising emergent managers.
12. Assist PSERS' Investment Professionals in conducting public market investment manager searches and facilitate the hiring of suitable institutional quality managers, including:
 - a. providing opportunities and expense reimbursement for PSERS to jointly meet and evaluate new managers at industry conferences;
 - b. providing a list of potential institutional quality managers appropriate for the mandate being considered;
 - c. conducting interviews with potential managers at PSERS;
 - d. conducting on-site due diligence meetings with potential managers prior to their selection; and
 - e. providing assistance with the contract/fee negotiations.
13. Provide on-going monitoring and oversight reports for all of PSERS' public market investment managers, including:
 - a. advance notice to PSERS of in-person meeting with investment managers in the Fund's portfolio;

- b.** analysis of the manager's absolute and relative performance in relation to benchmarks, investment objectives, and peer groups, including analysis of ex-post risk-adjusted performance;
 - c.** an analysis of attribution, holdings, style, and risk;
 - d.** updated research on each investment manager in the Fund's portfolio updated at least once every 18 months to include a review of investment performance, process, and the manager's organization;
 - e.** conduct on-site investment and operational due diligence meetings with current investment managers a minimum of every three years;
 - f.** advice on manager retention/termination; and
 - g.** assist in developing a formal manager review process.
- 14.** Advise PSERS' Investment Professionals and the Board about new developments in investment management techniques and portfolio management strategies. Analyze how new techniques might improve the investment program and whether they should be considered for implementation.
- 15.** Make available all firm research, including proprietary research, regardless of the firm department in which it was created. Research must be made available by electronic system.
- 16.** Provide access and consultation with the firm's research staff.
- 17.** Meet with the Board to report on investment matters. Generally, there are six regularly scheduled Board meetings annually. Special meetings may be scheduled as needed.
- 18.** Report the performance results to the Board quarterly, including relative results versus established benchmarks, results versus other public defined benefit pension plans, and the returns relative to the risks taken.
- 19.** Maintain and provide access to a database of U.S. and non-U.S. investment managers, including their philosophies, processes, organizations, performance, fees, and clients.
- 20.** Provide and maintain a secure, client-facing, web-based platform that is frequently updated and continuously available to PSERS that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools, allowing PSERS to:
 - a.** formulate investment policy and implement strategies;
 - b.** monitor and evaluate individual portfolio, asset class, and total fund performance, risk, and attribution analytics;
 - c.** formulate investment policy and implement strategies;

- d. develop asset allocation and rebalancing recommendations;
- e. select and evaluate public market investment managers, including public market manager research and consultant ratings;
- f. analyze and optimize manager teams; and,
- g. compare the Fund performance, including ex-post risk-adjusted performance, at the asset class and total fund levels to various peer groups.

It is expected that at least 20 years of the Fund's historical performance data, by investment portfolio, asset class, and at the total fund level will be included and that the database will be updated on a monthly basis. The foregoing services shall be made available directly to PSERS through CONSULTANT's proprietary tools or indirectly through licensed third party applications.

- 21. Provide (a) two, one-day, or (b) one, two-day, on-site, Fiduciary and Governance training sessions per year, which can be new Board member training, Board member training, PSERS' Investment Professional training, or some combination thereof. PSERS reserves the right to videotape any training sessions for educational purposes.
- 22. Advise the Board and PSERS' Investment Professionals on risk-related subjects (e.g., risk measurement, risk mitigation).
- 23. Advise the Board and PSERS' Investment Professionals on fiduciary and governance related subjects as requested by PSERS, including the following items:
 - (a) Provide advice and insights, as may be requested by PSERS, on public pension fund industry common and best practices;
 - (b) Assist as may be requested by PSERS with the development of new Board member orientation materials and conduct orientation sessions;
 - (c) Review and make recommendations, consistent with industry best practices, regarding clarity and documentation of the Board's governance framework, including the Investment Policy Statement ("IPS"), Board and Committee Charters, Delegations of Authority, investment implementation policies and procedures, etc.;
 - (d) Assist as may be requested with the development of a Board authority and delegation matrix, including:
 - (i) Clarification of what authority the Board has retained, what authority has been delegated, and to whom, and
 - (ii) Delegations to PSERS' Investment Professionals from the Board and/or CIO.
 - (e) Assist, as may be requested by PSERS, with strategic planning;

(f) Develop and administer, as may be requested by PSERS, a Board annual self-evaluation process.

24. Carry out other assignments that may be specified by the Board and PSERS' Investment Professionals, as required.

25. Conduct an operational risk gap analysis which will include an evaluation of the quality of the operational policies and procedures governing PSERS' Investment Professionals. The written report will include observations, comparisons to peers and recommendations in the following areas:

- (a) Investment Framework (Front, Middle, and Back Office)
- (b) Trade/Transaction Execution Policies and Procedures
- (d) Investment and Counterparty Risk Oversight
- (e) Compliance and Audit Testing
- (f) Data Governance, Technology and Business Continuity and Disaster Recovery Plans
- (g) Key service provider selection and monitoring procedures.

B. In providing Performance Measurement Services for the Fund, including all major asset classes recognized by PSERS as well as individual portfolios, the consultant will:

1. Prepare a written monthly report containing the calculated total return (gross and net of fees) for asset class, portfolio management styles, and individual portfolios, and compare PSERS' calculated data with benchmarks determined by PSERS and with data for a similar population of funds by asset class and portfolio management styles for all of the public market portfolios and composites. Returns should be calculated for the following time periods: one-month, three-months, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 20-year, 25-year, 30-year, and since inception.
2. Prepare a quarterly written report containing performance measurement attribution and analysis for each asset class and individual portfolio. The report should include a historical return analysis, dollar oriented analysis, return oriented (wealth relative) analysis, excess return analysis, and risk/return analysis. Returns should be calculated for the following time periods: quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 20-year, 25-year, 30-year, and since inception.
3. Reconcile performance with both individual portfolio managers as well as the custodian bank on a monthly basis.
4. Calculate PSERS' money weighted rate of return as required by GASB 75.
5. Create additional composites with historical returns for those composites as requested by PSERS.
6. Provide quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, and 10-year quartile ranking report of composite returns by fund (i.e. total fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes).

7. Provide consecutive year quartile ranking reports of composite returns by fund (i.e. total fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes) for the past five years.
8. Conduct performance attribution analysis to determine the value added by investment policy, asset allocation, and security selection.
9. Provide reasonable assistance to PSERS in uploading the consultant's performance data to PSERS' own investment system(s).
10. Prepare ex-post risk statistics and analytics for the same time periods, to the degree of depth, including benchmark comparatives, and use the same performance data from the above. Ex-post risk statistics and analytics should be robust and inclusive of industry best practices risk information.

III-2. Requested Services: Trust

The contractor will provide consulting services for the Trust including:

1. Review each plan's existing investment options.
2. Determine if the investment options offered by each plan are optimum choices given the considerations for diversification, risk and return.
3. Recommend additions or deletions to investment options as needed.
4. Provide a recommended transition plan and timeline incorporating any proposed changes in investment options.
5. Conduct a review of each plan's pricing structure including fund management fees and terms between the plans and the third party administrator (TPA).
6. Work with the TPA to review specific plan metrics, provide best practices and recommendations, and address issues that arise each quarter.
7. Assist in the development of investment policies for the plan.
8. Annually review general investment policy documents.
9. Periodically review goals, objectives and best practices with PSERS' investment committee.
10. Recommend enhancements to PSERS' investment committee governance processes.
11. Perform periodic fiduciary training.
12. Monitor, review, and provide advice on legislative and regulatory issues.
13. Monitor, review, and provide advice regarding best practices.

14. Monitor, review, and provide advice regarding fiduciary obligations.
15. Provide ongoing review of strengths and vulnerabilities in current practices.
16. Serve as the liaison between the record-keeper and PSERS to maximize the vendor relationship, resolve issues with the record-keeper, and ensure contractual commitments are met.
17. Lead and otherwise assist in any requisite RFP, RFQ, or RFI processes.

III-3. Requirements.

A. Emergency Preparedness.

To support continuity of operations during an emergency, including a pandemic, the Commonwealth needs a strategy for maintaining operations for an extended period of time. One part of this strategy is to ensure that essential contracts that provide critical business services to the Commonwealth have planned for such an emergency and put contingencies in place to provide needed goods and services.

1. Describe how you anticipate such a crisis will impact your operations.
2. Describe your emergency response continuity of operations plan. Please attach a copy of your plan, or at a minimum, summarize how your plan addresses the following aspects of pandemic preparedness:
 - a. Employee training (describe your organization's training plan, and how frequently your plan will be shared with employees).
 - b. Identified essential business functions and key employees (within your organization) necessary to carry them out.
 - c. Contingency plans for:
 - i. How your organization will handle staffing issues when a portion of key employees are incapacitated due to illness.
 - ii. How employees in your organization will carry out the essential functions if contagion control measures prevent them from coming to the primary workplace.
 - d. How your organization will communicate with staff and suppliers when primary communications systems are overloaded or otherwise fail, including key contacts, chain of communications (including suppliers), etc.
 - e. How and when your emergency plan will be tested, and if the plan will be tested by a third-party.

III-4. Mandatory Minimum Qualifications.

- A. The Offeror must meet all of the following minimum qualifications, and agree to meet each of the following requirements, to be given further consideration. Failure to satisfy each of the minimum qualifications, or agree to meet each of the following requirements, will result in the immediate rejection of the proposal.
1. As of December 31, 2018, the Offeror must have at least five (5) tax-exempt clients, of which at least 3 are public pension plan clients having over \$10 billion in assets, for whom it provides investment consulting work at both fund- and asset-class levels. Duties related to each engagement must include asset allocation, asset/liability, and risk analysis.
 2. The Offeror must have been in the business of providing investment consulting services for at least five years, evidenced by a certificate of incorporation or copy of Form ADV as well as documentation of investment consulting clients (including venture capital/private equity/real estate consulting clients) which date back five years.
 3. The Offeror must be a Registered Investment Advisor with the SEC under the Investment Advisors Act of 1940. Provide a copy of the latest Form ADV Parts I and II.
 4. The primary consultant and principal assistant that will be assigned to the PSERS account must each have at least five years' experience analyzing, monitoring, recommending for investment, or investing in, each asset class recognized by PSERS in its Investment Policy Statement, Objectives, and Guidelines, which can be obtained at <http://www.psers.pa.gov/About/Investment/Pages/Guide.aspx>.
 5. The Offeror must have, or have access to, a database sufficient in size and scope to allow an analysis of the risk and returns of investment firms and each of their strategy offerings.
 6. The Offeror's primary consultant must not have provided general consulting services to either the Commonwealth of Pennsylvania, State Employees' Retirement System, or the Commonwealth of Pennsylvania, Pennsylvania Municipal Retirement System during the past three years.
 7. The Offeror will be required to reimburse PSERS for, or pay directly on PSERS' behalf, the reasonable travel expenses actually incurred by PSERS, if any, (i) for members of PSERS' Professional Staff to travel to Offeror's location for due diligence and/or to discuss performance results, economic outlook, investment strategy, organization changes and other pertinent matters; (ii) to attend investment conferences, training, seminars or similar events sponsored by Offeror (or any affiliate of Offeror relating to the services provided under this Agreement); and (iii) to attend meetings and interviews at existing or prospective investment manager sites. Reimbursable or directly payable expenses will include airfare, automobile rental, lodging, meals, Offeror-sponsored event registration fees, and other travel-related expenses at maximum allowance rates established by the Commonwealth Management Directive 230.10 as revised, Travel and Subsistence Allowances. The reimbursable or directly payable expenses for each of (i), (ii), and (iii), above, will not exceed \$25,000 per calendar year.
 8. Offeror will be required to perform services under this agreement subject to the exercise of that degree of judgment and care under the circumstances then prevailing which persons of prudence, discretion, and intelligence who are expert in such matters, exercise in the management of like matters, not in regard to speculation but in regard to the permanent disposition of the Fund, considering the probable income to be derived therefrom as well as the probable safety of the invested capital. Offeror will be required to acknowledge, with respect to PSERS and the Fund

and/or Trust, that, without qualification, it is a “fiduciary” as that term is defined in the Employee Retirement Income Security Act of 1974 (ERISA), regardless of the applicability of ERISA to this agreement.

9. Offeror will be required to include in its consulting services staff professionals dedicated to, and expert in, investment risk, fiduciary, and investment governance topics.
 10. Offeror must provide and maintain a secure, client-facing, web-based platform that is frequently updated and continuously available to PSERS that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools.
- B. The Offeror’s consulting team must provide written responses to each of the aforementioned mandatory qualifications and requirements substantiating how your firm satisfies each qualification and confirming that your firm will satisfy each requirement. The responses must contain sufficient information as prescribed to assure the Board of its accuracy. **Failure to provide complete information will result in immediate rejection of the proposal.**

III-5. Offeror’s Qualifications.

A. Please provide the following information about your firm:

1. Provide a summary description of your firm including the name, year formed, history, ownership structure, names of owners or partners, subsidiary or affiliate relationships, and the reporting and control structure. If you are an affiliate or subsidiary of another company, what percentage of the firm’s total revenue does your division generate? Please describe the organizational structure and your relationship to the parent company and any other subsidiaries. List services to the investment community (trading, investment management, database) other than investment consulting services, provided by your firm, as well as services of any parent, subsidiary, or affiliate. If investment consulting is not your only line of business, please make clear in answering these questions the history and circumstances of your entrance into investment consulting.
2. Do senior executives have ownership interests in the firm? If so, how much?
3. State the name, title, address and telephone number of the proposal contact person. Will the primary consultant assigned to PSERS account have ownership interest in the firm or is there a specific arrangement for sharing in the profits earned by the enterprise (e.g., salary, bonus, group/individual performance incentives, profit sharing, etc.)? Please describe.

B. Please provide the following financial information:

1. Audited financial statements for the past three (3) years.
2. Any special audit reports concerning internal controls for the past three (3) years.

C. Within the past five years, have there been any significant developments (e.g., changes in ownership, personnel reorganization, new business ventures) in your firm? If so, describe these developments in detail.

- D.** Do you anticipate any significant changes in your firm? If so, describe these anticipated changes and their impact on clients.
- E.** Have any senior executives left the firm in the past five years? Please describe the circumstances of their departure(s).
- F.** Explain your firm's goals for expansion and accepting new client business. How will the firm control the quality of service to clients? Include the following:
1. Total number of accounts that will be accepted.
 2. Total assets that will be accepted.
 3. Plans for additions to professional staff and approximate timing in relation to growth of accounts and/or assets.
- G.** What is the location of firm headquarters and any branch offices? If several locations, what quality controls does the firm use to ensure consistency of services among clients, and how does the firm handle research, information processing and databases?
- H.** List your firm's lines of business and approximate contributions of each business to your firm's total revenue. If you are an affiliate or subsidiary of another company, what percentage of the firm's total revenue does your division generate? Please describe the organizational structure and your relationship to the parent company and any other subsidiaries.
- I.** Over the past five years, has your organization or any officer or principal been involved in any litigation or other legal proceedings, regulatory or other governmental investigation relating to your investment or consulting activities? If so, provide a brief explanation and indicate the current status.
- J.** Has your firm or any officer, director, partner, principal or employee ever been the subject of any non-routine investigation, inquiry, or enforcement action by a governmental agency or self-regulatory body regarding fiduciary responsibilities, consulting activities, or other investment-related matters or activities? If so, describe each instance and summarize any directives or letters of opinion that were issued.
- K.** Please provide a copy of the most recent review by a government agency or regulatory body of your firm that relates to the services sought by PSERS.
- L.** Please describe the levels of coverage for errors and omissions insurance and any fiduciary or professional liability insurance your firm carries. Is the coverage on a per client basis, or is the dollar figure applied to the firm as a whole? List the insurance carriers. Has your firm ever submitted a claim to your errors and omissions, liability, fiduciary or fidelity bond carrier(s)? If so, describe each instance.
- M.** Present the previous experience and expertise of the firm providing the services proposed for PSERS.
1. List the names of pension funds your firm has as clients, indicating whether your firm represents these clients on a discretionary or non-discretionary basis.

2. List your five largest public pension plan clients by assets. For each of these pension fund clients, please provide asset value of client by asset class, year client retained your firm, average five year asset mix of client, percent of funds for which you provided consulting services, and the five year annualized total return of the client funds' investment portfolio as of June 30, 2018.
3. Please complete the following for current clients:

Asset Value of Pension Fund Client	No. of Pension Fund Clients	Average Years Clients Retained the Firm
Less than \$1 billion		
\$1 billion – less than \$10 billion		
\$10 billion – less than \$30 billion		
More than \$30 billion		

4. Does your firm operate any funds or other pooled investment vehicles, including, but not limited to, funds of funds? Please identify each.
5. Please list the names of pension plan clients that you have added in the last three years, and the assets of each. Specify if DB, DC, or both.
6. Please provide the names of all pension plan clients that you have lost in the last three years, the asset size of each, and why they were lost. Specify if DB, DC, or both.
7. Does your firm have any record or rating system that depicts value it has added over either a random fund selection process or an intelligent indexing approach? If so, please provide and explain.
8. How does your firm evaluate the quality of its consulting services?

N. Describe your research and analysis capabilities, noting supporting human expertise and technology.

1. Are your resources internal or external? If any external resources are used, provide a description including the name of vendors providing these resources. How is the information used to inform and advise clients? List investment research reports or studies that you have provided clients in the past 12 months. Describe your capability to carry out special projects requested by PSERS. Provide sample reports that best represent your research capabilities.
2. Does your firm maintain a secure, client-facing platform that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools?
3. Is all firm research, including proprietary research, available to clients regardless of the firm department in which it was created?
4. Is analysis available to clients through firm analysts and software comparing public market managers with their peers? How quickly is this information provided following request?

5. Outline the sources used to obtain data for publication of newsletters or periodicals. Include samples of your publications.
6. Describe any other service not included in Part IV “Work Statement” that you believe would be beneficial to PSERS and that you are proposing to provide for PSERS.
7. State what you believe differentiates your consulting services from your competitors.
8. Explain in detail any potential for conflict that would be created by your firm contracting with PSERS, including other client relationships that may inhibit services to PSERS and/or the other clients.
9. How does your firm resolve potential conflicts of interest in recommending or making investments in prospective programs among clients?

III-6. Personnel Qualifications

- A. Provide an organization chart showing name, title, function, and area of expertise of pension fund consulting professionals and support staff.
- B. For proposed primary consultant, principal assistant, and risk professionals, provide the names of all clients and nature of engagement for which these individuals assume a similar role. What are their other duties for the firm?
- C. Delineate the proposed management of services to PSERS. Provide names of staff who will serve as primary consultants, principal assistants, and other general contacts with your firm. Specify the role and scope of involvement for each individual. Will the primary consultant be available to attend all Board meetings and assist PSERS’ Investment Professionals when needed?
- D. For proposed primary consultant, principal assistant, risk professionals, and other key individuals who will be providing services to PSERS, provide a biographical profile to include education, years and areas of professional investment consulting experience, and years and areas of professional investment consulting experience with your firm.
- E. Provide name and position of pension fund consulting professionals who were added to the firm during the past three years. Provide name and position of pension fund consulting professionals who left the firm during the past three years. Have any senior executives left or joined the firm in the past five (5) years? Please describe the circumstances of their departure(s) or their current roles. Please provide a description of your succession and continuity plans for management of the firm.
- F. How does the firm monitor performance of consultants, analysts, and other investment professionals that it employs?
- G. Provide a brief general description of the firm’s compensation agreements for professional staff, including bonuses, profit sharing and equity ownership. Is some component of compensation deferred? Does your firm have employment contracts and/or non-compete agreements with investment professionals?
- H. Describe the job qualifications required by your firm when hiring investment professionals. Are there specific qualifications unique to those involved in investment consulting?

I. Describe your internal training procedures for consultants and research analysts.

III-7. Soundness of Approach.

A. General Consulting Services (includes all asset classes)

1. What is the overall philosophy of the firm regarding an investment consultant's role with respect to the board of trustees, internal investment professionals, and investment managers?
2. State as clearly as possible the firm's investment philosophy. Are there any fundamental beliefs about capital markets which underpin the firm's investment advice to its pension plan clients? Include discussion on your views as they pertain to varying investment environments (e.g., inflationary, recessionary), and on the separation of alpha from beta.
3. What are the most critical issues to consider in establishing investment policy for a public sector DB pension plan? DC?
4. Please summarize, in one page or less, the firm's investment consulting capabilities and expertise. What are the firm's major strengths and limitations? Do you provide any services which are not provided by other investment consultants? Why should PSERS engage you as its investment consultant?
5. How would you suggest that we measure and evaluate the performance of your firm as an investment consultant?
6. Describe the process you will use to recommend investment objectives and policies for PSERS. Provide samples of investment objectives and policies you have developed for pension fund clients that demonstrate the types of approaches your firm might recommend to PSERS. Highlight risk management components of the process.
7. Describe the process and resources you will use to recommend asset allocations for PSERS. Discuss the possible circumstances and process whereby you might recommend that an asset allocation should be changed. Provide samples of asset allocation plans you have developed for pension fund clients.
8. Included as **Appendix J** is the Fund's Asset Allocation Plan as of June 30, 2018. Provide observations, and recommended changes, if any.
9. Describe the process you will use to recommend a structured investment program that includes core versus specialty portfolios, active versus passive portfolios, mix of investment management styles, and number of portfolios. Provide a sample structured investment program.
10. A sizeable portion of the Fund is invested internally by PSERS' Investment Professionals. How will you evaluate the expertise, performance, and consistency of investment approach employed by PSERS' Investment Professionals?
11. Describe how you will review the adequacy of PSERS' Investment Professionals and resources available to administer PSERS' investment program and invest the Fund's and/or the Trust's assets. Include in your description how you will assess the appropriateness of PSERS'

Professional Staff size and expertise, and the technological tools available to PSERS' Professional Staff.

12. How will you evaluate investment expenses incurred? Describe the evaluation framework in detail. What sources of industry/peer data will you employ?
13. Describe your process, and the variables included, in preparing a written Asset/Liability Study. Provide a sample Asset/Liability Study you would submit to the Board.
14. Describe what you will include in the analysis of PSERS' results with the Annual Investment Plan.
15. Describe the variables and methodology you will consider in recommending performance benchmark(s) for PSERS. Provide samples of benchmarks you have recently recommended for current pension fund clients. If risk benchmarks are different than performance benchmarks, describe the differences and provide the same information as performance benchmarks (i.e. variables, methodology and sample benchmarks).
16. Describe how you will identify and evaluate new investment opportunities to recommend to PSERS. Provide samples of reports that would be made available to PSERS which detail the results of your firm's analysis.
17. Discuss your willingness to provide PSERS with information on high conviction new managers at the earliest possible juncture to permit PSERS to secure capacity and negotiate terms with promising emergent managers.
18. Discuss your willingness to provide opportunities and expense reimbursement for PSERS to jointly meet and evaluate new managers at industry conferences.
19. Discuss your willingness to provide advance notice to PSERS of in-person meetings with investment managers in PSERS' portfolio.
20. Describe your overall approach to manager research and selection, including a list of any specific criteria that must be met in order for a manager to be considered and any characteristics that will automatically exclude a manager from consideration. Please provide an outline of your manager evaluation framework and sample reports.
21. Describe the process you will use to conduct investment manager searches and to recommend candidates to PSERS. Identify all criteria that might be taken into account in order to complete your recommendations. Include a description of the size of your manager database and experience negotiating performance-based fees.
22. Describe your process of reviewing investment manager performance and consistency of investment approach.
23. Describe your process of performing due diligence review and analysis on the professional staff and operations of investment managers. Provide samples of reports that would be made available to PSERS which detail the results of your firm's analysis.

24. Do you have dedicated individuals or teams separately responsible for investment, operational, and legal/compliance due diligence? If so, does each group have authority to “veto” a prospective investment before a recommendation is made to a client or at any time thereafter?
25. Do you perform background checks on the key individuals of all prospective managers? What roles/titles are typically included in this group (i.e. CIO, portfolio managers, CEO, CFO, etc.)? What specific red flags are you looking for? What service provider(s) do you utilize for background checks?
26. Describe your approach to performing reference checks on prospective managers, including both named and informal references.
27. Do you examine and contact the third-party service providers of all prospective managers? If so, describe the key diligence components and areas of focus with respect to: 1) Administrators, 2) Custodians and Prime Brokers, 3) Auditors, and 4) Legal Advisors.
28. Please discuss the firm’s database of investment managers. How many single-strategy and how many fund of funds managers are in the database? What are some key factors the firm uses to rate managers in the database? Can the database be accessed by clients online?
29. How willing is the firm to perform due diligence on managers that are not in the database but that the Board would like reviewed? Is there an extra charge for that type of research?
30. Each year, on average, how many managers do you: 1) Meet with, 2) Subject to full due diligence, 3) Update prior full due diligence, and 4) Approve for investment?
31. Do you host any client events or conferences? If so, please describe them. Are managers invited to attend?
32. Discuss your willingness to establish a knowledge transfer relationship with PSERS and describe the activities and information that this would entail including data sharing and analytics.
33. Describe the access and interaction PSERS would have with members of your staff, other than the assigned consultant and backup.
34. Briefly summarize your philosophy regarding the consultant’s relationships with boards, internal investment professionals, and investment managers.
35. List all standard services provided in a typical pension plan consulting assignment. List the specialized services that you have provided to meet other needs of your clients.

B. Performance Measurement, Risk, and Attribution Reporting

1. Describe the content, format, and method of delivery of the **quarterly** performance reports you will prepare for PSERS. Performance reports are deemed to be inclusive of ex-post risk reporting and analysis. Describe instances where performance and risk indices and benchmarks are different. Include:
 - a. Data and method used to calculate total return before and after fees. Please identify which criteria in your methodology can be customized by client preference. PSERS, PSERS’

custodian bank, investment managers, and/or fund administrators will supply a monthly portfolio asset list with accrual market values for marketable securities. PSERS' will supply quarterly portfolio market values and cash flow data for real estate, venture capital, and private equity investments.

Please indicate whether you use your own pricing sources and describe how you will investigate/resolve pricing errors in the custodian bank's asset list. Describe how you handle pricing for derivative investments. Identify your pricing sources and hierarchy by asset class.

- b. Time periods for which total returns can be calculated.
- c. Standard indices, custom indices, and benchmarks you will use for comparison.
- d. Total population of funds and public pension funds (including a large fund subset) you will use for universe comparisons.
- e. Characteristics you will compare.
- f. Breakdown of PSERS' fund market value.
- g. Market conditions.

Please comment on your ability to provide draft quarterly performance reports within 3 business days following receipt of final quarter-end market values from our custodian and partnerships. Will you be able to issue final reports within 3 business days after receiving comments from PSERS on the draft? What quality control systems and procedures do you use to ensure that reports are prepared accurately and delivered on time?

Provide sample quarterly pension fund performance reports.

- h. Describe in detail the performance measurement attribution and analysis service you propose to provide for PSERS. Note its usefulness for PSERS. Provide sample reports.
2. Describe the content, format, and method of delivery of the **monthly** performance reports you will prepare for PSERS and its advisors. Performance reports are deemed to be inclusive of ex-post risk reporting and analysis. Describe instances where performance and risk indices and benchmarks are different. The monthly reports will include only the public market portfolios and composites and will exclude the private market portfolios.
- a. Data and method used to calculate total return before and after fees. Please identify which criteria in your methodology can be customized by client preference. PSERS' custodian bank, investment managers and/or fund administrators will supply a monthly portfolio asset list with accrual market values for marketable securities.

Please indicate whether you use your own pricing sources and describe how you will investigate/resolve pricing errors in the custodian bank's asset list. Describe how you handle pricing for derivative investments.

- b. Time periods for which total returns can be calculated.

- c. Standard indices, custom indices, and benchmarks you will use for comparison.
- d. Total population of funds and public pension funds (including a large fund subset) you will use for universe comparisons.
- e. Characteristics you will compare.

Please comment on your ability to provide draft monthly performance reports within 3 business days following receipt of final month-end market values from our custodian. Will you be able to issue final reports within 3 business days after receiving comments from PSERS on the draft? What quality control systems and procedures do you use to ensure that reports are prepared accurately and delivered on time?

Provide sample monthly pension fund performance reports by asset class.

- 3. Describe in detail the PC-based or Internet-based fund management and consulting tools to which your firm will provide the Board and PSERS' Investment Professionals access. Provide sample reports. NOTE: PSERS may require a demonstration of such tools.
- 4. Provide sample reports by asset class depicting investment and risk exposures, and note their usefulness for PSERS.

C. Defined Contribution Plan Experience

- 1. Describe the firm's experience in working with defined contribution plan sponsors.
- 2. List all of the firm's standard services provided in a typical defined contribution plan advisory and investment consulting relationship.
- 3. List all of the firm's standard services provided in a typical defined contribution plan manager search and evaluation program.
- 4. What are the firm's capabilities in the area of providing performance monitoring and evaluation of defined contribution annuity products?
- 5. Describe the firm's methodology for determining types of funds in the investment line-up.
- 6. Describe the firm's methodology for determining the asset classes to be recommended to a defined contribution plan sponsor.
- 7. What is the firm's philosophy on default investment options?
- 8. What is the firm's philosophy on tiered investment options (i.e. target date funds, core array, brokerage account, etc.)?
- 9. What is the firm's philosophy on the number of participant directed investment options that the Defined Contribution Plan should provide?
- 10. What is the firm's philosophy regarding active versus passive participant directed investment options?

11. How would the firm evaluate the types of risk associated with the Trust investments you would recommend for the Defined Contribution Plan?
12. Does the firm have experience in evaluating third party administrator services? If yes, please describe.
13. Does the firm have resources dedicated to defined contribution consulting and/or research? If yes, please describe and provide organizational charts and biographies as appropriate.
14. List other special or unique services that the firm has provided to other clients, particularly defined contribution plan clients.

III-8. Miscellaneous.

- A. Please discuss the appropriate role(s) of risk management in administration of investments for a public pension plan such as PSERS. Specify criteria that should be measured and analyzed, and the appropriate role(s) of the Board, PSERS' Professional Staff, and consultant in measuring and analyzing the risk criteria. How does this relate to your definition of beta? How does this relate to your views on the separation of alpha from beta? Do you think of risk using a risk factor approach?
- B. Please discuss your views on the appropriateness of either passively managed portfolios, actively managed portfolios, or a combination of both actively and passively managed portfolios, by asset class. What important factors must be considered by a pension fund such as PSERS in order to determine which of these approaches is likely to be most beneficial?
- C. In which circumstances might ETFs be appropriate for PSERS? What risks, benefits, and other factors must be considered? Please be specific.
- D. For each asset class specified below, identify the role you see it playing in a large pension fund today and in the future, and identify form (e.g., separate account, derivative) of investments (if any) you feel are prudent.
 1. Real Estate
 2. Commodities
 3. Infrastructure
 4. Hedge Funds
 5. Alternative (e.g., venture capital, private equity, private debt)
 6. Risk Parity
 7. Energy Master Limited Partnerships
 8. Leverage

9. Smart Beta

10. Cyber Currencies (i.e., bitcoin)

- E. Please discuss your firm's ability and experience in performing detailed investment or operational due diligence reviews on public pension plans with internal investment management.
- F. What do you see as being the most significant changes that will be occurring in asset allocation for pension funds over the next 10 years? Please comment.
- G. Disclose all services provided and compensation received (including the sources of such compensation, whether direct or indirect) between your firm and investment managers, plan officials, beneficiaries, sponsors, and/or others as required by Standard 2b of the Investment Management Consultants Association Standards of Practice.
- H. Describe any business relationships that you or any of your affiliates have had within the past two years with the Commonwealth of Pennsylvania or with members of PSERS' Professional Staff or the Board.
- I. State whether you, any of your principals, or any other affiliates have any business involvements that could be viewed as potential conflicts of interest.
- J. Provide a copy of your current Code of Ethics adopted pursuant to 204A-1 of the Advisers Act.
- K. What procedures and written policies do you have to reduce/eliminate any conflict of interest that could occur between investment managers and plan sponsors?
- L. Please state clearly whether your firm has any current tax issues or disputes with the Commonwealth of Pennsylvania (PSERS would be unable to execute a contract with your firm until these circumstances were resolved).

III-9. References. List five current pension fund clients as references. For each reference, include client name, name of contact person, address, telephone number, asset value of client, services the client uses, and number of years the client retained the firm. The client should have funds of similar size and complexity to PSERS and you should be providing services similar to those proposed for PSERS. PSERS intends to contact the references.

In addition, identify the five (5) largest clients lost within the last 5 years and indicate the reason(s) for termination. Include client name, name of contact person with title, address (both building and email), telephone number, services the client used, and number of years the client retained the firm.

III-10. Work Plan. Describe in narrative form your technical plan for accomplishing the work. Use the task descriptions in Part IV of this RFP as your reference point. Modifications of the task descriptions are permitted; however, reasons for changes should be fully explained. Indicate the number of person hours allocated to each task. Include a Program Evaluation and Review Technique (PERT) or similar type display, time related, showing each event. If more than one approach is apparent, comment on why you chose this approach.

III-11. Objections and Additions to Standard Contract Terms and Conditions. The Offeror will identify which, if any, of the terms and conditions contained in **Part VI and Appendix A** it would like to

negotiate and what additional terms and conditions the Offeror would like to add to the standard contract terms and conditions. The Offeror's failure to make a submission under this paragraph will result in its waiving its right to do so later, but the Issuing Office may consider late objections and requests for additions if to do so, in the Issuing Office's sole discretion, would be in the best interest of the Commonwealth. The Issuing Office may, in its sole discretion, accept or reject any requested changes to the standard contract terms and conditions. The Offeror shall not request changes to the other provisions of the RFP, nor shall the Offeror request to completely substitute its own terms and conditions for **Part VI and Appendix A**. All terms and conditions must appear in one integrated contract. The Issuing Office will not accept references to the Offeror's, or any other, online guides or online terms and conditions contained in any proposal.

Regardless of any objections set out in its proposal, the Offeror must submit its proposal, including the cost proposal, on the basis of the terms and conditions set out in **Part VI and Appendix A**. The Issuing Office will reject any proposal that is conditioned on the negotiation of the terms and conditions set out in **Part VI and Appendix A or to other provisions of the RFP as specifically identified above**. The Board will not consider proposals that contain any limitations of Offeror liability for services provided. Any proposal containing such a limitation shall be rejected.

PART IV

COST SUBMITTAL

IV-1. Cost Submittal. The information requested in this **Part IV** shall constitute the Cost Submittal. The Cost Submittal shall be placed in a separate sealed envelope within the sealed proposal, separated from the technical submittal. The total proposed cost should be broken down into the components set forth in **Appendix F – Cost Submittal Worksheet**. The percentage of commitment to Small Diverse Businesses and Small Businesses should not be stated in the Cost Submittal. Offerors should **not** include any assumptions in their cost submittals. If the Offeror includes assumptions in its cost submittal, the Issuing Office may reject the proposal. Offerors should direct in writing to the Issuing Office pursuant to **Part I, Section I-9** of this RFP any questions about whether a cost or other component is included or applies. All Offerors will then have the benefit of the Issuing Office's written answer so that all proposals are submitted on the same basis.

The Issuing Office will reimburse the selected Offeror for work satisfactorily performed after execution of a written contract and the start of the contract term, in accordance with contract requirements, and only after the Issuing Office has issued a notice to proceed.

PART V

SMALL DIVERSE BUSINESS AND SMALL BUSINESS PARTICIPATION SUBMITTAL

V-1. Small Diverse Business and Small Business General Information. The Issuing Office encourages participation by Small Diverse Businesses and Small Businesses as prime contractors, and encourages all prime contractors to make significant commitments to use Small Diverse Businesses and Small Businesses as subcontractors and suppliers.

A Small Business must meet each of the following requirements:

- The business must be a for-profit, United States business;
- The business must be independently owned;
- The business may not be dominant in its field of operation;
- The business may not employ more than 100 full-time or full-time equivalent employees;
- The business may not exceed an average of \$38.5 million in gross annual revenues over the preceding three years.

For credit in the RFP scoring process, a Small Business must complete the DGS/BDISBO self-certification process. Additional information on this process can be found at:

<http://www.dgs.pa.gov/Businesses/Small%20Diverse%20Business%20Program/Pages/default.aspx>

A Small Diverse Business is a DGS-verified minority-owned small business, woman-owned small business, veteran-owned small business, service-disabled veteran-owned small business, LGBT-owned small business, Disability-owned small business, or other small businesses as approved by DGS, that are owned and controlled by a majority of persons, not limited to members of minority groups, who have been deprived of the opportunity to develop and maintain a competitive position in the economy because of social disadvantages.

For credit in the RFP scoring process, a Small Diverse Business must complete the DGS verification process. Additional information on this process can be found at:

<http://www.dgs.pa.gov/Businesses/Small%20Diverse%20Business%20Program/Pages/default.aspx>

An Offeror that qualifies as a Small Diverse Business or a Small Business and submits a proposal as a prime contractor is not prohibited from being included as a subcontractor in separate proposals submitted by other Offerors.

A Small Diverse Business or Small Business may be included as a subcontractor with as many prime contractors as it chooses in separate proposals.

The Department's directory of self-certified Small Businesses and DGS/BDISBO-verified Small Diverse Businesses can be accessed from: <http://www.dgs.internet.state.pa.us/suppliersearch>

Questions regarding the Small Diverse Business and Small Business Programs, including questions about the self-certification and verification processes can be directed to:

Department of General Services

Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO)
Room 611, North Office Building
Harrisburg, PA 17125
Phone: (717) 783-3119
Fax: (717) 787-7052
Email: RA-BDISBOVerification@pa.gov
Website: www.dgs.pa.gov

V-2. Small Diverse Business and Small Business (SDB/SB) Participation Submittal. All Offerors are required to submit the Small Diverse Business and Small Business Participation Submittal Form and related Letter(s) of Intent (available at http://www.dgs.pa.gov/_layouts/download.aspx?SourceUrl=http://www.dgs.pa.gov/Documents/Procurement%20Forms/Small%20Diverse%20Business%20and%20Small%20Business%20Participation%20Submittal.xlsx) as described in Part I, Section I-11. To receive points for Small Diverse Business or Small Business participation commitments, the Small Diverse Business or Small Business must be listed in the Department's directory of self-certified Small Businesses and DGS/BDISBO-verified Small Diverse Businesses as of the proposal due date and time. BDISBO reserves the right to adjust overall Small Diverse Business or Small Business commitments to correctly align with the Small Diverse Business or Small Business status of a prime contractor or subcontractor as of the solicitation due date and time, and also to reflect the correct sum of individual subcontracting commitments listed within the Letters of Intent.

- A. Offerors must indicate their status as a Small Diverse Business and as a Small Business through selection of the appropriate checkboxes.
- B. Offerors must include a numerical percentage which represents the total percentage of the total cost in the Cost Submittal that the Offeror commits to paying to Small Diverse Businesses and Small Businesses as subcontractors.
- C. Offerors must include a listing of and required information for each of the Small Diverse Businesses and/or Small Businesses with whom they will subcontract to achieve the participation percentages outlined on the Small Diverse Business and Small Business Participation Submittal.
- D. Offerors must include a Letter of Intent (available at the following link: http://www.dgs.pa.gov/_layouts/download.aspx?SourceUrl=http://www.dgs.pa.gov/Documents/Procurement%20Forms/Small%20Diverse%20Business%20and%20Small%20Business%20Participation%20Submittal.xlsx) signed by both the Offeror and the Small Diverse Business or Small Business for each of the Small Diverse Businesses and Small Businesses identified in the Small Diverse Business and Small Business Participation Submittal form. At minimum, the Letter of Intent must include the following:
 - 1. The fixed numerical percentage commitment and associated estimated dollar value of the commitment made to the Small Diverse Business or Small Business; and
 - 2. A description of the services or supplies the Small Diverse Business or Small Business will provide; and
 - 3. The timeframe during the initial contract term and any extensions, options and renewals when the Small Diverse Business or Small Business will perform or provide the services and/or supplies; and

4. The name and telephone number of the Offeror's point of contact for Small Diverse Business and Small Business participation; and
 5. The name, address, and telephone number of the primary contact person for the Small Diverse Business or Small Business.
- E. Each Small Diverse Business and Small Business commitment which is credited by BDISBO along with the overall percentage of Small Diverse Business and Small Business commitments will become contractual obligations of the selected Offeror.

NOTE: Offerors will not receive credit for any commitments for which information as above is not included in the Small Diverse Business and Small Business Participation Submittal. Offerors will not receive credit for stating that after the contract is awarded they will find a Small Diverse Business or Small Business.

NOTE: Equal employment opportunity and contract compliance statements referring to company equal employment opportunity policies or past contract compliance practices do not constitute proof of Small Diverse Business and/or Small Business Status or entitle an Offeror to receive credit for Small Diverse Business or Small Business participation.

V-3. Contract Requirements—Small Diverse Business and Small Business Participation. All contracts containing Small Diverse Business and Small Business Participation must contain the following contract provisions to be maintained through the initial contract term and any subsequent options or renewals:

- A. Each Small Diverse Business and Small Business commitment which was credited by BDISBO and the total percentage of such Small Diverse Business and Small Business commitments made at the time of proposal submittal, BAFO or contract negotiations, as applicable, become contractual obligations of the selected Offeror upon execution of its contract with the Commonwealth.
- B. For purposes of monitoring compliance with the selected Offeror's SDB or SB commitments, the contract cost is the total amount paid to the selected Offeror throughout the initial contract term.
- C. All Small Diverse Business and Small Business subcontractors credited by BDISBO must perform at least 50% of the work subcontracted to them.
- D. The individual percentage commitments made to Small Diverse Businesses and Small Businesses cannot be altered without written approval from BDISBO.
- E. Small Diverse Business and Small Business commitments must be maintained in the event the contract is assigned to another prime contractor.
- F. The selected Offeror and each Small Diverse Business and Small Business for which a commitment was credited by BDISBO must submit a final, definitive subcontract agreement signed by the selected Offeror and the Small Diverse Business and/or Small Business to BDISBO within 30 days of the final execution date of the Commonwealth contract. A Model Subcontract Agreement which may be used to satisfy this requirement – **Model Form of Small Diverse and Small Business Subcontract Agreement** – is available at the following link:
<http://www.dgs.pa.gov/layouts/download.aspx?SourceUrl=http://www.dgs.pa.gov/Documents/Proc>

[urement%20Forms/Model%20Form%20Subcontract%20Agreement.docx](#)). The subcontract must contain:

1. The specific work, supplies or services the Small Diverse Business and/or Small Business will perform; location for work performed; how the work, supplies or services relate to the project; and the specific timeframe during the initial term and any extensions, options and renewals of the prime contract when the work, supplies or services will be provided or performed.
 2. The fixed percentage commitment and associated estimated dollar value that each Small Diverse Business and/or Small Business will receive based on the final negotiated cost for the initial term of the prime contract.
 3. Payment terms indicating that the Small Diverse Business and/or Small Business will be paid for work satisfactorily completed within 14 days of the selected Offeror's receipt of payment from the Commonwealth for such work.
 4. Commercially reasonable terms for the applicable business/industry that are no less favorable than the terms of the selected Offeror's contract with the Commonwealth and that do not place disproportionate risk on the Small Diverse Business and/or Small Business relative to the nature and level of the Small Diverse Business' and/or Small Business' participation in the project.
- G. If the subcontract terms omit any of the information required in paragraph F, and that information is otherwise reflected within the selected Offeror's SDB and SB Participation Submittal or LOI, that information is incorporated into the subcontract agreement. To the extent that any subcontract terms conflict with the requirements of paragraph F or information contained within the selected Offeror's SDB and SB Participation Submittal or LOI, the order of precedence is as follows: 1) the requirements of paragraph F, 2) the selected Offeror's SDB and SB Participation Submittal, and 3) the terms of the subcontract agreement.
- H. If the selected Offeror and a Small Diverse Business or Small Business credited by BDISBO cannot agree upon a definitive subcontract within 30 days of the final execution date of the Commonwealth contract, the selected Offeror must notify BDISBO.
- I. The Selected Offeror shall complete the Prime Contractor's Quarterly Utilization Report and submit it to the contracting officer of the Issuing Office and BDISBO within ten (10) business days at the end of each quarter of the contract term and any subsequent options or renewals. This information will be used to track and confirm the actual dollar amount paid to Small Diverse Business and Small Business subcontractors and suppliers and will serve as a record of fulfillment of the contractual commitment. If there was no activity during the quarter, the form must be completed by stating "No activity in this quarter." A late fee of \$100.00 per day may be assessed against the Selected Offeror if the Utilization Report is not submitted in accordance with the schedule above.
- J. The Selected Offeror shall notify the Contracting Officer of the Issuing Office and BDISBO when circumstances arise that may negatively impact the selected Offeror's ability to comply with Small Diverse Business and/or Small Business commitments and to provide a corrective action plan. Disputes will be decided by the Issuing Office and DGS.
- K. If the Selected Offeror fails to satisfy its Small Diverse Business and/or Small Business commitment(s), it may be subject to a range of sanctions BDISBO deems appropriate. Such sanctions include, but are not limited to, one or more of the following: a determination that the

selected Offeror is not responsible under the Contractor Responsibility Program; withholding of payments; suspension or termination of the contract together with consequential damages; revocation of the selected Offeror's Small Diverse Business status and/or Small Business status; and/or suspension or debarment from future contracting opportunities with the Commonwealth.

PART VI

CONTRACT TERMS AND CONDITIONS

Please refer to this website for Commonwealth Standard Contract Terms and Conditions (BOP-1203):

[http://www.dgs.pa.gov/Documents/Procurement%20Forms/BOP-1203 Std Terms and Conditions ElectronicContract.pdf](http://www.dgs.pa.gov/Documents/Procurement%20Forms/BOP-1203%20Std%20Terms%20and%20Conditions%20ElectronicContract.pdf)

APPENDIX A

SAMPLE PURCHASE ORDER TERMS AND CONDITIONS AND INFORMATION SECURITY ADDENDUM

PURCHASE ORDER TERMS AND CONDITIONS RIDER I

Pursuant to purchase order number _____ (“Purchase Order”), _____ (the “CONSULTANT”) agrees to perform the services set forth therein, those set forth below, those set forth in its Proposal of XX XX, 2019, which is attached to the Purchase Order as Rider __ and incorporated therein by reference, and those set forth in the Public School Employees’ Retirement Board (“Board”) transacting business as the Public School Employees’ Retirement System’s (“PSERS”) Request for Proposal (“RFP”) dated XX XX, 2019, which is attached to the Purchase Order as Rider ____ and incorporated therein by reference.

A. Consulting Services for the Public School Employees Retirement Fund (the “Fund”), including all asset classes and investments:

1. The CONSULTANT will conduct a comprehensive review and analysis of investment objectives, policies, asset allocation, and portfolio structure, inclusive of defining an investable risk beta portfolio, and recommend changes, if appropriate.
2. The CONSULTANT will review the adequacy of PSERS’ Investment Professionals and resources, and recommend changes, if appropriate.
3. The CONSULTANT will prepare a written Asset/Liability Study annually for each calendar year and present the results to the Board in August of the following year.
4. The CONSULTANT will recommend appropriate performance and risk benchmarks for individual portfolios, each asset class, and for the total fund.
5. The CONSULTANT will review and make recommendations regarding individual portfolio risk guidelines at least annually.
6. The CONSULTANT will recommend suitable investment opportunities and practical implementation methods; research supporting such recommendations must have been completed within the prior 12 months.
7. The CONSULTANT will recommend appropriate investment strategies, tactics, procedures and practices.
8. The CONSULTANT will provide research reports on asset allocation, investment issues, and description and evaluation of alternative approaches.
9. The CONSULTANT will provide information on market conditions and explain their impact on the Fund’s investments.

10. The CONSULTANT will provide PSERS with information on high conviction new managers at the earliest possible juncture to permit PSERS to secure capacity and negotiate terms with promising emergent managers.
11. The CONSULTANT will assist PSERS' Investment Professionals in conducting public market investment manager searches and facilitate the hiring of suitable institutional quality managers, including:
 - a. providing opportunities and expense reimbursement for PSERS to jointly meet and evaluate new managers at industry conferences;
 - b. providing a list of potential institutional quality managers appropriate for the mandate being considered;
 - c. conducting interviews with potential managers at PSERS;
 - d. conducting on-site due diligence meetings with potential managers prior to their selection; and
 - e. providing assistance with the contract/fee negotiations.
12. The CONSULTANT will provide on-going monitoring and oversight reports for all of PSERS' public market investment managers, including:
 - a. advance notice to PSERS of in-person meeting with investment managers in PSERS' portfolio;
 - b. analysis of the manager's absolute and relative performance in relation to benchmarks, investment objectives, and peer groups, including analysis of ex-post risk-adjusted performance;
 - c. an analysis of attribution, holdings, style, and risk;
 - d. updated research on each investment manager in PSERS' portfolio updated at least once every 18 months to include a review of investment performance, process, and the manager's organization;
 - e. on-site investment and operational due diligence meetings with current investment managers a minimum of every three years;
 - f. advice on manager retention/termination; and
 - g. assist in developing a formal manager review process.
13. The CONSULTANT will advise PSERS' Investment Professionals and the Board about new developments in investment management techniques and portfolio management strategies. Analyze how new techniques might improve the investment program and whether they should be considered for implementation.

14. The CONSULTANT will make available all firm research, including proprietary research, regardless of the firm department in which it was created. Research must be made available by electronic system.
15. The CONSULTANT will provide access and consultation with the firm's research staff.
16. The CONSULTANT will meet with the Board to report on investment matters. Generally, there are six regularly scheduled Board meetings annually. Special meetings may be scheduled as needed.
17. The CONSULTANT will report the performance results to the Board quarterly, including relative results versus pre-established benchmarks, results versus other public defined benefit pension plans, and the returns relative to the risks taken.
18. The CONSULTANT will maintain and provide access to a database of U.S. and non-U.S. investment managers, including their philosophies, processes, organizations, performance, fees, and clients.
19. The CONSULTANT will provide and maintain a secure, client-facing, web-based platform that is frequently updated and continuously available to PSERS that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools that allows PSERS' Investment Professionals to:
 - a. formulate investment policy and implement strategies;
 - b. monitor and evaluate asset class and total fund performance and risk;
 - c. develop asset allocation and rebalancing recommendations;
 - d. select and evaluate public market investment managers, including public market manager research and consultant ratings;
 - e. assess investment risks;
 - f. analyze and optimize manager teams; and,
 - g. compare the Fund performance, including ex-post risk-adjusted performance, at the asset class and total fund levels to various peer groups.

It is expected that at least 20 years of PSERS historical performance data, by investment portfolio, asset class, and at the total fund level will be included and that the database will be updated on a monthly basis. The foregoing services shall be made available directly to PSERS through CONSULTANT's proprietary tools or indirectly through licensed third party applications.

20. The CONSULTANT will provide (a) two, one-day, or (b) one, two-day, on-site, Fiduciary and Governance training sessions per year, which can be new Board member training, Board member training, PSERS' Investment Professional training, or some combination thereof. PSERS reserves the right to videotape any training sessions for educational purposes. Any additional Fiduciary

and Governance training sessions, in any one year, beyond those provided for in this Subsection 20 will be invoiced and paid quarterly in arrears at per session cost to be mutually agreed upon by the parties in writing.

21. The CONSULTANT will advise the Board and PSERS' Investment Professionals on risk-related subjects (e.g., risk measurement, risk mitigation).

22. The CONSULTANT will advise the Board and PSERS' Investment Professionals on fiduciary and governance related subjects as requested by PSERS, including the following items:

(a) The CONSULTANT will provide advice and insights, as may be requested by PSERS, on public pension fund industry common and best practices;

(b) The CONSULTANT will assist as may be requested by PSERS with the development of new Board member orientation materials;

(c) The CONSULTANT will review and make recommendations, consistent with industry best practices, regarding clarity and documentation of the Board's governance framework, including the Investment Policy Statement ("IPS"), Board and Committee Charters, Delegations of Authority, investment implementation policies and procedures, etc.;

(d) The CONSULTANT will assist as may be requested with the development of a Board authority and delegation matrix, including:

- (i) Clarification of what authority the Board has retained, what authority has been delegated, and to whom, and
- (ii) Delegations to PSERS' Investment Professionals from the Board and/or CIO.

(e) The CONSULTANT will assist, as may be requested by PSERS, with strategic planning;

(f) The CONSULTANT will develop and administer, as may be requested by PSERS, a Board annual self-evaluation process.

23. The CONSULTANT will carry out other assignments that may be specified by the Board and PSERS' Investment Professionals, as required.

24. The CONSULTANT will conduct an operational risk gap analysis which will include an evaluation of the quality of the operational policies and procedures governing PSERS' Investment Professionals. The written report will include observations, comparisons to peers and recommendations in the following areas:

- (a) Investment Framework (Front, Middle, and Back Office)
- (b) Trade/Transaction Execution Policies and Procedures
- (d) Investment and Counterparty Risk Oversight
- (e) Compliance and Audit Testing
- (f) Data Governance, Technology and Business Continuity and Disaster Recovery Plans
- (g) Key service provider selection and monitoring procedures.

B. Performance Measurement, Risk, and Attribution Services for the Fund, including all asset classes and individual portfolios:

1. The CONSULTANT will prepare a monthly report containing calculated total return (before and after fees) for asset class, portfolio management styles, and individual portfolios, and compare PSERS' calculated data with benchmarks and with data for a similar population of funds by asset class and portfolio management styles for all of the public market portfolios and composites. Returns should be calculated for the following time periods: one-month, three-months, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 15-year, 20-year, 25-year, 30-year, and since inception.
 2. The CONSULTANT will prepare a quarterly written report containing performance measurement attribution and analysis for each asset class and individual portfolios. The report should include a historical return analysis, dollar oriented analysis, return oriented (wealth relative) analysis, excess return analysis and risk/return analysis. Returns should be calculated for the following time periods: quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 15-year, 20-year, 25-year, 30-year, and since inception.
 3. The CONSULTANT will be responsible for reconciling performance with both individual portfolio managers as well as the custodian bank on a monthly basis.
 4. The CONSULTANT will be responsible for the creation of additional composites with historical returns for those composites as requested by PSERS.
 5. The CONSULTANT will provide quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 15-year, 20-year, 25-year, and 30-year quartile ranking reports of composite returns by Fund (i.e. Total Fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes).
 6. The CONSULTANT will provide consecutive year quartile ranking reports of composite returns by Fund (i.e. Total Fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes) for the past five years.
 7. The CONSULTANT will provide a performance attribution analysis to determine the value added by investment policy, asset allocation, and security selection.
 8. The CONSULTANT will provide reasonable assistance to PSERS in uploading the consultant's performance data to PSERS' own investment system(s).
 9. The CONSULTANT will prepare ex-post risk statistics and analytics for the same time periods, to the degree of depth, including benchmark comparatives, and use the same performance data from the above. Ex-post risk statistics and analytics should be robust and inclusive of industry best practices risk information.
- C. Consulting Services for the School Employees' Defined Contribution Trust (the "Trust"). The CONSULTANT will:
1. Review each plan's existing investment options.
 2. Determine if the investment options offered by each plan are optimum choices given the considerations for diversification, risk and return.

3. Recommend additions or deletions to investment options as needed.
4. Provide a recommended transition plan and timeline incorporating any proposed changes in investment options.
5. Conduct a review of each plan's pricing structure including fund management fees and terms between the plans and the third party administrator ("TPA").
6. Work with the TPA to review specific plan metrics, provide best practices and recommendations, and address issues that arise each quarter.
7. Assist in the development of investment policies for the plan.
8. Annually review general investment policy documents.
9. Periodically review goals, objective and best practices with PSERS' investment committee.
10. Recommend enhancements to PSERS' investment committee governance processes.
11. Perform periodic fiduciary training.
12. Monitor, review, and provide advice on legislative and regulatory issues.
13. Monitor, review, and provide advice regarding best practices.
14. Monitor, review, and provide advice regarding fiduciary obligations.
15. Provide ongoing review of strengths and vulnerabilities in current practices.
16. Serve as the liaison between the record-keeper and PSERS to maximize the vendor relationship, resolve issues with the record-keeper, and ensure contractual commitments are met.
17. Lead and otherwise assist in any requisite RFP, RFQ, or RFI processes.

D. Terms and Conditions

1. The CONSULTANT's compensation for performing the above services shall be as set forth in the Purchase Order. The CONSULTANT acknowledges and agrees that no further fees are payable by PSERS for the services rendered under the Purchase Order.
2. The CONSULTANT shall hold the Commonwealth of Pennsylvania, the Board, PSERS, the Fund and the Trust, their beneficiaries, directors, officers, agents, and employees harmless from and indemnify the Commonwealth of Pennsylvania, the Board, PSERS, the Fund and the Trust, their beneficiaries, directors, officers, agents, and employees against any and all claims, demands, actions, or liability of any nature, including attorneys' fees and court costs, based upon or arising out of any services performed, or the failure to perform services, by the CONSULTANT, its directors, officers, employees, and agents under the Purchase Order and shall, at the request of PSERS, defend at the CONSULTANT's expense actions brought against the Commonwealth of

Pennsylvania, the Board, PSERS and/or the Fund or the Trust, based upon any such claims or demands, and the costs of such defense shall be borne by the CONSULTANT and shall not constitute any expense of, nor shall be paid out of, the Fund, the Trust, Board, PSERS or Commonwealth of Pennsylvania assets.

3. PSERS acknowledges that [name of PC-Based or Internet-Based tool] (the “Software”) is provided under the Purchase Order solely for PSERS’ use. PSERS shall not provide any other organization with access to the Software, or with reports or any other information obtained through it, except that PSERS may provide any asset manager who manages the Fund’s or the Trust’ assets with copies of reports that relate to the assets under management by that manager. Notwithstanding the foregoing, PSERS shall be authorized to provide access to and copies of the reports and any other information obtained through the Software and the services performed under the Purchase Order to the public and any other organization as may be required under the Right to Know Law and other similar laws.

The Purchase Order entitles PSERS to use as many copies of the Software as it shall reasonably require during the term of the Purchase Order. CONSULTANT retains all title and ownership of the Software, including the original disk copy and all subsequent copies of the Software, regardless of the form or media in or on which the original and other copies may exist. The Purchase Order is not a sale of the original Software or any copy.

CONSULTANT retains all title and ownership of the software and accompanying documentation, including the original disk copy and all subsequent copies of the software and documentation, regardless of the form or media in or on which the original and other copies may exist. PSERS agrees upon termination of the Purchase Order to return to CONSULTANT all software and portions and copies thereof, documentation and other equipment furnished with the service.

All reports prepared under the Purchase Order for PSERS shall become the property of PSERS.

CONSULTANT shall defend, at its expense, any action brought against PSERS arising out of any claim that PSERS’ use of the services provided hereunder infringes upon the intellectual property rights of any third party; provided further that CONSULTANT shall indemnify and hold PSERS harmless against any and all damages and costs awarded against PSERS by final court order or fully executed settlement agreement.

The Software and accompanying written materials (the “Documentation”) are owned by CONSULTANT and are protected by United States copyright laws and international treaty provisions. Therefore, PSERS must treat the Software and Documentation like any other copyrighted material. Unauthorized copying of the Software, including Software that has been modified, merged, or included with other software, or the Documentation is expressly forbidden. Subject to these restrictions, PSERS may make a reasonable number of copies of the Software solely for back-up purposes.

PSERS may not distribute copies of the Software or Documentation to others, nor may PSERS rent or lease the Software or the Documentation or transfer control of the Software or Documentation to a third party without CONSULTANT’s prior express written consent. In addition, PSERS may not modify, adapt, translate, reverse engineer, decompile, disassemble, or create derivative works based on the Software without CONSULTANT’s prior express written consent.

CONSULTANT warrants that (i) it has the right to provide PSERS with access to the Software in accordance with the Purchase Order, and (ii) the Software shall conform to the written documentation and shall operate in accordance with CONSULTANT's written representations to PSERS.

Neither party shall be liable to the other party for any loss, injury, delay, damages or other casualties suffered by the other due to strikes, riots, storms, fires, or acts of God or government, beyond the reasonable control of such party.

4. The CONSULTANT shall not enter into any agreement by or on behalf of PSERS that (i) is binding on PSERS or allows, either expressly or by operation of law, recourse to PSERS, and (ii) creates any actual or potential liability on the part of PSERS that exceeds the scope of authority delegated to the CONSULTANT under the Purchase Order, or (iii) waives any of PSERS' rights, defenses, causes of action, or immunities. Liabilities that are not authorized by PSERS and prohibited by this Section D (4) include, without limitation, any obligation on the part of PSERS to indemnify a third party or to pay attorney fees, legal expenses, penalties, or liquidated damages.
5. The CONSULTANT shall maintain during the term of the Purchase Order a policy of errors and omissions insurance for the protection of the Fund and/or the Trust, with a limit of liability of at least \$10,000,000, to cover the CONSULTANT, its officers, and its affiliates to the extent any affiliate performs services under the Purchase Order. Unless otherwise approved by PSERS, the maximum deductible on the errors and omissions policy shall be no greater than \$1,000,000. The CONSULTANT shall submit copies of the actual policies of said insurance as directed by PSERS, and PSERS shall cause to be issued a written determination on compliance. CONSULTANT shall thereafter maintain annual filings of current certificates of insurance with PSERS during the term of the Purchase Order and any extension thereof. If the CONSULTANT changes insurance carriers for insurance required hereunder, CONSULTANT shall submit copies of the actual policies of said insurance as directed by PSERS. The errors and omissions policy shall contain a provision or endorsement that coverage afforded thereunder shall not be canceled or changed until the underwriter has furnished PSERS at least 30 days' prior written notice of any cancellation or change. PSERS may, in its discretion, require such changes with respect to insurance coverage as it deems appropriate for the protection of the PSERS' Fund by giving written notice of such changes to the CONSULTANT at least 30 days in advance of the effective date for such changes.
6. The CONSULTANT represents and confirms that it is duly registered and in good standing as an investment advisor under the Investment Advisers Act of 1940 or is exempt therefrom (and will maintain such registration or exemption). If registered pursuant to said Act, the CONSULTANT has furnished to PSERS Parts I and II of the CONSULTANT's current Form ADV filed with the Securities and Exchange Commission pursuant to Section 203(c) of the Investment Advisers Act of 1940.
7. The CONSULTANT shall perform its services under the Purchase Order as an independent contractor, and CONSULTANT acknowledges that it maintains Workers' Compensation Insurance and shall accept full responsibility for the payments of premiums for Workers' Compensation Insurance and Social Security, as well as all income tax deductions and other taxes or payroll deductions required by law for itself for performing services specified by the Purchase Order.
8. The CONSULTANT shall provide immediate written notice to PSERS of any change in the CONSULTANT's status, including, without limitation, change in directors, officers, or employees

who consult on PSERS' account; modification of the business organization; material change in SEC or other government or private registration, accreditation, or licensing; material deterioration of financial condition including but not limited to the filing of petition in bankruptcy; the CONSULTANT's awareness that its representations and warranties herein cease to be true; and litigation alleging the CONSULTANT's negligence or fraud.

9. The CONSULTANT covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services under the Purchase Order. CONSULTANT further covenants that, in the performance of the Purchase Order, it will not knowingly engage any other person having such interest.
10. It is agreed between the parties to the Purchase Order that the Purchase Order contemplates the rendition of expert professional services, and, therefore, neither the Purchase Order, nor any interest therein, nor any claim arising thereunder shall be transferred or assigned by either party to any other party or parties.
11. The performance of work under the Purchase Order may be terminated by the BOARD in whole or in part, from time to time. Any such termination shall be effected by delivery to the CONSULTANT of a written Notice of Termination specifying the extent to which performance of the work under the contract is terminated and the date on which such termination becomes effective. In the event of termination, fees for services shall be prorated and paid or repaid. Such termination shall not relieve CONSULTANT of any liability that may be incurred for its activities in connection with the Purchase Order prior to said termination. Likewise, CONSULTANT shall have the right to terminate the Purchase Order with thirty (30) days' written notice to PSERS. Also, under these circumstances, the fees for services shall be prorated and paid or repaid.
12. The CONSULTANT shall not publish or otherwise disclose, except to PSERS and except matters of public record, any information or data obtained hereunder from private individuals, organizations, or public agencies, in a publication whereby the information or data furnished by or about any particular person or establishment can be identified as relating to PSERS or its responsibilities, except with the consent of such person or establishment.
13. The CONSULTANT agrees that any specific plans, material, records, etc., developed under the Purchase Order remain the property of PSERS, and reproduction or duplication of such materials may be done only with the approval of PSERS.
14. No member of the General Assembly of the Commonwealth of Pennsylvania or any individual employed by the Commonwealth shall be admitted to any share or part of the Purchase Order, or to any benefit that may arise therefrom, but this provision shall not be construed to extend to the Purchase Order if made with a corporation for its general benefit.
15. The CONSULTANT shall comply with the Standard Contract Terms and Conditions attached to the Purchase Order as Rider ____ and incorporated therein by reference, which provisions may be modified from time to time with written notice to CONSULTANT.
16. CONSULTANT shall maintain such records, books, and accounts pertaining to services and payments under the Purchase Order in accordance with generally accepted accounting principles consistently applied. All such records, books, and accounts shall be maintained and preserved during the term of the Purchase Order and any extension thereof and for four years thereafter.

During such period, PSERS, or any other department or representative of the Commonwealth of Pennsylvania, from time to time upon reasonable notice, shall have the right to inspect, duplicate, and audit such records, books, and accounts for all purposes authorized and permitted by law. CONSULTANT may preserve such records, books, and accounts in original form or on microfilm, magnetic tape, or any other generally recognized and accepted process.

17. Any notice, demand, direction, instruction, or other communication required or permitted hereunder shall be confirmed in writing and shall be sufficiently given for all purposes when sent (a) by certified or registered U.S. mail, postage prepaid, (b) by a nationally recognized courier service that maintains verification of actual delivery, (c) by facsimile, with a copy sent by first class U.S. mail (provided that if the date of dispatch is not a working day, the facsimile shall be deemed to have been received at the opening of business of the addressee on the next working day), or (d) by delivering the same in person to any party at the following addresses or such other addresses as may be designated in writing from time to time by the parties:

PSERS: James H. Grossman, Jr., Chief Investment Officer
Pennsylvania, Public School Employees'
Retirement System
5 North Fifth Street
Harrisburg, Pennsylvania 17101

CONSULTANT: _____

18. PSERS reserves all immunities, defenses, rights, or actions arising out of its status as a sovereign entity or from the Eleventh Amendment to the United States Constitution. No provision of the Purchase Order shall be construed as a waiver of any such immunities, defenses, rights, or actions.
19. Execution of the Purchase Order constitutes certification by CONSULTANT that (a) the number appearing on the Purchase Order is CONSULTANT's correct taxpayer identification number, and (b) CONSULTANT is not subject to backup withholding because (i) CONSULTANT is exempt from backup withholding, (ii) CONSULTANT has not been notified by the IRS that it is subject to backup withholding as a result of a failure to report all interest or dividends, or (iii), the IRS has notified CONSULTANT that it is no longer subject to backup withholding.
20. The Purchase Order shall be governed by the laws of the Commonwealth of Pennsylvania and, for all purposes, shall be construed in accordance with said laws and the decisions of the courts of the Commonwealth of Pennsylvania therein, and shall be binding upon the successors and assigns of the parties thereto, and constitutes the entire agreement between PSERS and CONSULTANT with respect to the consulting services to be furnished as provided herein. No amendment or modification changing the scope or terms of the Purchase Order shall have any force or effect unless it is in writing and approved by both parties.
21. If any one or more of the covenants, agreements, provisions, or terms of the Purchase Order shall be held contrary to any express provision of law, or contrary to the policy of express law though not expressly prohibited, or against public policy, or shall for any reason whatsoever be held invalid, then such covenants, agreements, provisions, or terms shall be deemed severable from the remaining

covenants, agreements, provisions, or terms of the Purchase Order and shall in no way affect the validity or enforceability of the remainder of the Purchase Order or the rights of the parties thereto.

22. CONSULTANT shall reimburse PSERS, or pay directly on PSERS' behalf, the reasonable travel expenses actually incurred by PSERS, if any, for each contract year (i) for travel to CONSULTANT's location for due diligence and/or to discuss performance results, economic outlook, investment strategy, organization changes and other pertinent matters and (ii) to attend investment conferences, training, seminars or similar events sponsored by CONSULTANT or any affiliate of CONSULTANT. Reimbursable or directly payable expenses shall include airfare, automobile rental, lodging, meals, CONSULTANT -sponsored meeting registration fees, and other travel-related expenses at maximum allowance rates established by the Commonwealth Management Directive 230.10 as revised, Travel and Subsistence Allowances. The reimbursable or directly payable expenses for each of (i) or (ii), above, shall not exceed \$25,000 per calendar year. PSERS shall submit a properly documented claim for reimbursement or direct payment of such travel expenses, which CONSULTANT shall pay within 30 days after receipt.
23. CONSULTANT shall perform services under the Purchase Order subject to the exercise of that degree of judgment and care under the circumstances then prevailing which persons of prudence, discretion, and intelligence who are experts in such matters, exercise in the management of like matters, not in regard to speculation but in regard to the permanent disposition of the Fund, considering the probable income to be derived therefrom as well as the probable safety of the invested capital. CONSULTANT acknowledges that it is a "fiduciary" with respect to PSERS and the Fund as that term is defined in the Employee Retirement Income Security Act of 1974 (ERISA), regardless of the applicability of ERISA to the Purchase Order.

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Information Security Addendum

Rider II

This Information Security Addendum (“Addendum”) made as of the Effective Date, by and between the Commonwealth of Pennsylvania, Public School Employees’ Retirement System (“PSERS”) and _____ (“Contractor”) sets forth additional terms and conditions with respect to information security applicable to _____ (the “Agreement”). The terms and conditions agreed to in this Addendum are the minimum required for the Agreement and shall take precedence over any term of the Agreement which attempts to reduce, waive or remove these terms and conditions.

WHEREAS, PSERS wishes to disclose certain information to Contractor, and Contractor is authorized to collect and/or use certain information, pursuant to the terms of the Agreement; and

WHEREAS, PSERS and Contractor intend to protect the privacy and provide for the confidentiality of such information.

NOW THEREFORE, in consideration of the foregoing recitals, which are incorporated herein, and the mutual promises and undertakings hereinafter set forth, and the exchange of information pursuant to the Agreement and this Addendum, the parties agree as follows:

I. Definitions

- A. Authorized Persons. Authorized Persons include Contractor’s employees and contractors who have appropriate PSERS’ clearance and a specific need for such access in order to perform Contractor’s services for PSERS.
- B. Industry Standards. Industry Standards include National Institute of Standards and Technology (NIST) 800 Series, NIST Cybersecurity Framework and ISO 27001/2, or their generally recognized equivalents.
- C. PSERS Data. PSERS Data is any data or information that Contractor creates, obtains, accesses, receives (from PSERS or on behalf of PSERS), hosts or uses in the course of its performance of the Agreement;
- D. Public Data. Public Data means any specific information or data, regardless of form or format, that PSERS has actively and intentionally disclosed, disseminated, or made available to the public.
- E. Multi-Factor Authentication: The use of two or more of the Authentication Methods listed below. Two-factor would employ two of the methods; three-factor would employ one each of all three methods.
 - i. Something you know (e.g. PIN, password, shared information)
 - ii. Something you possess (e.g. token, smart card, digital certificate)
 - iii. Something you are (biometrics – e.g. fingerprint, voice, iris, face).
- F. Services. The services pursuant to the Agreement and any Statement of Work (“SOW”).
- G. Documentation. All documentation related to the Services, including but not limited to the SOW.
- H. PSERS Confidential Information. PSERS Data that is not Public Data, including but not limited to information containing personally identifiable information (“PII”) protected health information (“PHI”) and electronic protected health information (“ePHI”) as defined in HIPPA

regulations, investment portfolio information and trade secrets. (For the avoidance of doubt, trade secrets include but are not limited to limited partnership agreements, side letters, private placement memoranda and similar information.)

II. Data Security.

- A. Compliance. Contractor shall comply with the Information Technology (“IT”) standards and policies issued by the Governor’s Office of Administration, Office for Information Technology (OA/OIT) (located at: <http://www.oa.pa.gov/Policies/Pages/itp.aspx>), including the accessibility standards set out in IT Bulletin ACC001, IT Accessibility Policy. The Contractor shall ensure that Services procured under this Contract comply with the applicable standards. In the event such standards change during Contractor’s performance, and the Commonwealth requests that Contractor comply with the changed standard, then any incremental costs incurred by Contractor to comply with such changes shall be paid for pursuant to a change order to the Contract.
- B. Data Protection. To the extent that Contractor is charged with creating, accessing, transmitting, maintaining, hosting or using PSERS’ Data under the Agreement, Contractor shall preserve the confidentiality, integrity and availability of PSERS’ Data by implementing and maintaining administrative, technical and physical controls that conform to Commonwealth of Pennsylvania IT Policies and Industry Standards. Implemented security controls shall provide a level of security which is commensurate with the sensitivity of the data to be protected.
- C. Data Use and Access. Contractor shall use PSERS’ Data only and exclusively to support the performance of services for PSERS under the Agreement and not for any other purpose. With the exception of Public Data, absent PSERS’ prior written consent, Contractor shall not at any time during or after the term of the Agreement disclose PSERS’ Data to any person, other than Authorized Persons and PSERS personnel in connection with the performance of the services (except as required by law). If such disclosure is required by law, Contractor shall notify PSERS prior to such disclosure, unless such notification is prohibited by law.
- D. Data Backup. Where appropriate to protect the integrity and availability of PSERS’ Data, Contractor shall maintain (and cause any third-party hosting company that it uses to maintain) a means to backup and recover PSERS’ Data in the event that PSERS’ Data is lost, corrupted or improperly destroyed. PSERS shall have the right to establish backup security for PSERS’ Data and to keep backup PSERS’ Data and PSERS’ Data files in its possession if it chooses.
- E. Return of PSERS’ Data. Contractor shall ensure that, upon request, PSERS can retrieve PSERS’ Data in the event the Contractor is unable to continue providing the services under the Agreement due to termination of the Agreement or otherwise. In the event of a termination and upon PSERS’ request, the Contractor will provide PSERS’ Data in a mutually acceptable format.
- F. Destruction of PSERS’ Data. Contractor shall erase, destroy, and/or render unrecoverable all PSERS’ Data in Contractor’s possession that is no longer required for the performance of its duties under the Agreement. Upon request, Contractor shall certify in writing that these actions have been completed within seven (7) days of PSERS’ request.
- G. Effect of Termination. Unless directed otherwise by PSERS, upon termination of the Agreement for any reason, Contractor shall maintain PSERS’ Data and continue to extend the protections of the Agreement and this Addendum to such information for a period of six months at which point it shall return and destroy all PSERS’ Data received from PSERS (or created or received by Contractor on behalf of PSERS) regardless of form, and shall retain no copies of PSERS’ Data. If return or destruction of PSERS’ Data is not feasible, Contractor shall continue to extend the

protections of the Agreement and this Addendum to such information and limit further use of PSERS' Data to those purposes that make the return or destruction of PSERS' Data infeasible.

III. Contractor Security.

- A. Information Security Program. For the term of the Agreement, Contractor agrees that it has and will maintain a formal information security program which is appropriate for the types of services that it provides. Such program is and will be consistent with Industry Standards.
- B. Contractor Personnel. Contractor agrees that it shall only use highly qualified personnel and contractors in performing the Agreement and, to the extent not prohibited by applicable law, shall require each to pass a background check.
- C. Acceptance of Acceptable Use Policy. Contractor shall ensure that all Contractor personnel, including employees and contractors, who access PSERS' network as a part of performing the Agreement, will agree to PSERS' Acceptable Use Policy as found in Management Directive 205.34, as it may be amended from time to time.
- D. Multi-Factor Authentication. For services exposed to the Internet, where sensitive information is stored, processed or transmitted, Contractor will provide Multi-Factor Authentication for user authentication to the web application via workstation and mobile browsers. If the service is provided via mobile application as well, that application must also be protected by Multi-Factor Authentication.
- E. Security Awareness Training. Contractor shall ensure its personnel and partners are provided cybersecurity awareness education and are adequately trained to perform their information security-related duties and responsibilities consistent with Commonwealth of Pennsylvania IT Policies.

IV. Security Incident and Breach Notification.

- A. Contractor agrees to notify PSERS upon learning of: (i) unauthorized access, loss, alteration, theft or corruption of PSERS' Confidential Information; (ii) any event that creates a substantial risk to the confidentiality, integrity or availability of PSERS' Data; (iii) a breach of any of Contractor's security obligations under this Addendum; or (iv) any other event requiring notification under applicable law. In such an instance, Contractor agrees to:
 - i. Take such action as may be necessary to preserve forensic evidence and eliminate the cause of the risk or breach within Contractor's reasonable control. As soon as practicable after discovery, Contractor shall undertake a thorough forensic investigation of any compromise or improper use and provide PSERS all information necessary to enable PSERS to fully understand the nature and extent of the compromise or improper use to the extent known.
 - ii. And, notify PSERS by telephone at (____) ____ - ____ and (____) ____ - ____ and by e-mail at RA-PSISO@pa.gov regarding such an event without undue delay and in any event within 24 hours of discovery, and
 - iii. To the extent that the breach or incident was the fault of Contractor:
 - a) assume the cost of informing all such affected individuals in accordance with applicable law, and
 - b) indemnify, hold harmless and defend PSERS and its trustees, officers, and employees from and against any claims, damages, or other harm related to such incident or breach.
- B. Security Incident Investigations.

Contractor agrees to cooperate with PSERS in investigating a security incident, as declared by PSERS, and provide the name and contact information, of at least two (2) security contacts who will respond to PSERS in a timely manner, dependent on criticality, in the event that PSERS must investigate a security incident. The current security contacts are as follows:

Contact Names: _____
Phone Numbers: _____
Email Addresses: _____

V. Maintenance of Safeguards.

- A. Contractor shall maintain and follow Industry Standards with respect to any of PSERS' Confidential Information in Contractor's possession or control and protect such information against any loss, alteration, theft or corruption.
- B. At PSERS' request, Contractor shall provide PSERS with copies of its information security policies, processes, and procedures. Contractor will notify PSERS of any changes to its policies, processes or procedures that relate to the security of PSERS' Confidential Information in Contractor's possession.

VI. Information Security Audit.

- A. PSERS shall have the right to review Contractor's information security program prior to the commencement of Services and from time to time during the Term of the Agreement. During the performance of the Services, on an ongoing basis annually and immediately in the event of a security incident, PSERS, including its professional advisors and auditors, at its own expense, shall be entitled to perform, or to have performed, an on-site assessment of Contractor's information security program.
- B. PSERS shall have the right to review Contractor's information security program through Contractor's annual submission to PSERS of its current SOC2 report. The report must document an assessment conducted by a qualified, independent third party. Assessment scope must address the services provided to PSERS, including but not limited to related people, process and technology.
- C. Upon PSERS' request, Contractor agrees to complete, within forty-five (45) days of receipt of PSERS' request, an assessment questionnaire provided by PSERS regarding Contractor's information security program, including artifacts for a subset of controls.

VII. Application Security.

In the event the Contractor conducts application software development for PSERS, Contractor will either make source codes available for review by PSERS or will conduct source code scanning using a commercial security tool. Scans must be conducted annually and at any time significant code changes are made. Scan reports will be made available to PSERS within two weeks of execution. Contractor must disclose remediation timelines for high, medium and low risk security code defects. Scans must occur before code is implemented in production. High risk security code defects may not be implemented in production without written approval from either PSERS' Executive Director, Deputy Executive Director or Assistant Executive Director.

VIII. Compliance with Applicable State and Federal Law.

Contractor shall comply with all applicable federal, state, and local laws concerning data protection and privacy when handling PSERS' Data.

IX. Enforcing Compliance.

Contractor shall enforce and be responsible for compliance by all its personnel and contractors with the provisions of this Information Security Addendum and all other confidentiality obligations owed to PSERS.

X. Accommodation of Additional Protections.

Contractor agrees to comply with such additional protections as PSERS shall reasonably request.

XI. Termination.

A breach by Contractor of any provision of this Addendum, as reasonably determined by PSERS, shall constitute a material breach of the Agreement and shall provide grounds for immediate termination of the Agreement by PSERS pursuant to the Agreement.

XII. Indemnification.

Contractor shall indemnify, hold harmless and defend PSERS from and against all claims, losses, liabilities, damages, judgments, costs and other expenses, including PSERS's costs and attorney fees, incurred as a result of, or arising directly or indirectly out of or in connection with Contractor's failure to meet any of its security obligations under this Addendum; and (ii) any claims, demands, awards, judgments, actions and proceedings made by any person or organization arising out of or in any way connected with Contractor's performance under this Addendum. Limitations on Contractor's liability, regardless of conflicting language elsewhere in the Agreement, shall not apply to claims related to Contractor's breach of the information security sections of this Addendum.

XIII. Intellectual Property Infringement Indemnification.

Contractor shall indemnify, defend and hold PSERS harmless from any and all claims brought against PSERS alleging that the Services and/or Documentation or PSERS' use of the Services and/or Documentation constitutes a misappropriation or infringement of intellectual property ("IP") of any Third Party. Contractor agrees to be responsible for all costs or expenses, to include reasonable attorneys' fees awarded or resulting from any claim. PSERS shall, after receiving notice of a claim, advise Contractor of such notification. Limitations on Contractor's liability, regardless of conflicting language elsewhere in any Agreement, shall not apply to claims related to Contractor's misappropriation or infringement of another's intellectual property.

XIV. Contractor Liability Insurance.

Contractor shall procure, and maintain for the duration of the contract, insurance against claims and damages which may arise from or in connection with the performance of its work to include IP infringement and privacy or data breaches coverage. Coverage shall have limits of no less than \$5,000,000.00 per occurrence and \$10,000,000.00 aggregate.

XV. Survival; Order of Precedence.

The provisions of this Addendum shall survive expiration or termination of the Agreement.

XVI. Entire Agreement.

The Agreement, including any exhibits and/or schedules thereto, and this Addendum contain the entire understanding of the Parties with respect to the subject matter hereof and supersedes all prior agreements, oral or written, and all other communications between the Parties relating to such subject matter.

**APPENDIX B
PROPOSAL COVER SHEET
COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
RFP# PSERS RFP 2018-6**

Enclosed in three separately sealed submittals is the proposal of the Offeror identified below for the above-referenced RFP:

Offeror Information:	
Offeror Name	
Offeror Mailing Address	
Offeror Website	
Offeror Contact Person	
Contact Person's Phone Number	
Contact Person's Facsimile Number	
Contact Person's E-Mail Address	
Offeror Federal ID Number	
Offeror SAP/SRM Vendor Number	

Submittals Enclosed and Separately Sealed:	
<input type="checkbox"/>	Technical Submittal <input type="checkbox"/> Domestic Workforce Utilization Certification
<input type="checkbox"/>	Small Diverse Business and Small Business Participation Submittal <input type="checkbox"/> Small Diverse Business and Small Business Participation Submittal Form <input type="checkbox"/> Small Diverse Business and Small Business Letter(s) of Intent
<input type="checkbox"/>	Cost Submittal

<i>Signature</i>	
Signature of an official authorized to bind the Offeror to the provisions contained in the Offeror's proposal:	
Printed Name	
Title	

FAILURE TO COMPLETE, SIGN AND RETURN THIS FORM WITH THE OFFEROR'S PROPOSAL MAY RESULT IN THE REJECTION OF THE OFFEROR'S PROPOSAL

APPENDIX C

DOMESTIC WORKFORCE UTILIZATION CERTIFICATION

To the extent permitted by the laws and treaties of the United States, each proposal will be scored for its commitment to use the domestic workforce in the fulfillment of the contract. Maximum consideration will be given to those offerors who will perform the contracted direct labor exclusively within the geographical boundaries of the United States or within the geographical boundaries of a country that is a party to the World Trade Organization Government Procurement Agreement. Those who propose to perform a portion of the direct labor outside of the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement will receive a correspondingly smaller score for this criterion. In order to be eligible for any consideration for this criterion, offerors must complete and sign the following certification. This certification will be included as a contractual obligation when the contract is executed. Failure to complete and sign this certification will result in no consideration being given to the offeror for this criterion.

I, _____ [title] of _____ [name of Contractor] a _____ [place of incorporation] corporation or other legal entity, ("Contractor") located at _____ [address], having a Social Security or Federal Identification Number of _____, do hereby certify and represent to the Commonwealth of Pennsylvania ("Commonwealth") (Check **one** of the boxes below):

☐ All of the direct labor performed within the scope of services under the contract will be performed exclusively within the geographical boundaries of the United States or one of the following countries that is a party to the World Trade Organization Government Procurement Agreement: Aruba, Austria, Belgium, Bulgaria, Canada, Chinese Taipei, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Liechtenstein, Lithuania, Luxemburg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom

OR

☐ _____ percent (____ %) [Contractor must specify the percentage] of the direct labor performed within the scope of services under the contract will be performed within the geographical boundaries of the United States or within the geographical boundaries of one of the countries listed above that is a party to the World Trade Organization Government Procurement Agreement. Please identify the direct labor performed under the contract that will be performed outside the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement and identify the country where the direct labor will be performed:

[Use additional sheets if necessary]

The Department of General Services [or other purchasing agency] shall treat any misstatement as fraudulent concealment of the true facts punishable under Section 4904 of the *Pennsylvania Crimes Code*, Title 18, of Pa. Consolidated Statutes.

Attest or Witness:

Corporate or Legal Entity's Name

Signature/Date

Signature/Date

Printed Name/Title

Printed Name/Title

APPENDIX D
IRAN FREE PROCUREMENT CERTIFICATION

<http://www.dgs.pa.gov/Documents/Procurement%20Forms/IranFreeProcurementCertificationForm.pdf>

<http://www.dgs.pa.gov/Documents/Procurement%20Forms/ProposedIranFreeProcurementList.pdf>

APPENDIX E

Trade Secret Confidential Proprietary Information Notice Form

http://www.dgs.pa.gov/Documents/Procurement%20Forms/TradeSecret_ConfidentialPropertyInfoNotice.pdf

APPENDIX F COST SUBMITTAL

Defined Benefit Component Only

Calendar Year	Fee for Consulting, External Manager ODD & Performance Measurement	Fee for Consulting Only	Fee for External Manager Operational Due Diligence Only	Fee for Performance Measurement Only
06/01/2019 to 05/31/2020	\$	\$	\$	\$
06/01/2020 to 05/31/2021	\$	\$	\$	\$
06/01/2021 to 05/31/2022	\$	\$	\$	\$
06/01/2022 to 05/31/2023	\$	\$	\$	\$
06/01/2023 to 05/31/2024	\$	\$	\$	\$
Total (5 years)	\$	\$	\$	\$

Defined Contribution Component Only

Calendar Year	Fee for Consulting, External Manager ODD, & Performance Measurement	Fee for Consulting Only	Fee for External Manager Operational Due Diligence Only	Fee for Performance Measurement Only
06/01/2019 to 05/31/2020	\$	\$	\$	\$
06/01/2020 to 05/31/2021	\$	\$	\$	\$
06/01/2021 to 05/31/2022	\$	\$	\$	\$
06/01/2022 to 05/31/2023	\$	\$	\$	\$
06/01/2023 to 05/31/2024	\$	\$	\$	\$
Total (5 years)	\$	\$	\$	\$

Defined Benefit/Defined Contribution Combined

Calendar Year	Fee for Consulting, External Manager ODD, & Performance Measurement	Fee for Consulting Only	Fee for External Manager Operational Due Diligence Only	Fee for Performance Measurement Only
06/01/2019 to 5/31/2020	\$	\$	\$	\$
06/01/2020 to 5/31/2021	\$	\$	\$	\$
06/01/2021 to 05/31/2022	\$	\$	\$	\$

06/01/2022 to 05/31/2023	\$	\$	\$	\$
06/01/2023 to 05/31/2024	\$	\$	\$	\$
Total (5 years)	\$	\$	\$	\$

Fees should include the use of analytics software as well as attendance at up to six board meetings a year (on average, your attendance would normally only be requested quarterly).

APPENDIX G
SMALL DIVERSE BUSINESS (SDB) AND SMALL BUSINESS (SB)
PARTICIPATION SUBMITTAL

Project Description: _____

RFP #: _____

Proposal Due Date: _____

Commonwealth Agency Name: _____

OFFEROR (Prime Contractor) INFORMATION

Offeror Company's Name: _____

Offeror Contact Name: _____ **Email:** _____

Title: _____ **Phone:** _____

Is your firm a DGS-Verified Small Diverse Business? ☐ Yes ☐ No **(MUST check one)**

If yes, Verification Expiration Date: _____

Is your firm a DGS-Self-Certified Small Business? ☐ Yes ☐ No **(MUST check one)**

If yes, Certification Expiration Date: _____

To confirm your company's SDB/SB status and expiration, please click or use the following link:

<http://www.dgs.pa.gov/Businesses/Small%20Diverse%20Business%20Program/Small-Diverse-Business-Verification/Pages/Finding-Small-Diverse-Businesses.aspx>

SUBCONTRACTING INFORMATION:

Percentage Commitment for SDB and SB Subcontracting Participation

After examination of the contract documents, which are made a part hereof as if fully set forth herein, the Offeror commits to the following percentages of the total contract cost for Small Diverse Business and Small Business subcontracting participation.

Small Diverse Business Subcontracting percentage commitment:

_____ % _____ **Percent**
(Figure) (Written)

Small Business Subcontracting percentage commitment:

_____ % _____ **Percent**
(Figure) (Written)

Listing SDB and SB Subcontractors

The Offeror must list in the chart below the SDBs and SBs that will be used to meet the percentage commitments provided above, along with the requested information about each SDB and SB Subcontractor. Include as many pages as necessary. Offerors must also include a Letter of Intent (LOI) for each SDB/SB listed. To receive points for SDB or SB participation commitments, the SDB or SB must be listed in the Department's directory of self-certified SBs and DGS/BDISBO-verified SDBs as of the proposal due date. The directory of self-certified SBs and DGS/BDISBO-verified SDBs can be accessed at the following link:

<http://www.dgs.pa.gov/Businesses/Small%20Diverse%20Business%20Program/Small-Diverse-Business-Verification/Pages/Finding-Small-Diverse-Businesses.aspx>

SDB/SB name, percent commitment to SDB/SB, and estimated \$ value of commitment will automatically populate in the LOI tabs.						
Offeror Company's Name:		0				
SDB/SB Subcontractor Name	SDB or SB	Primary Contact Name	Description of Services or Supplies to be Provided	% of Total Contract Cost Committed	Estimated \$ Value of Commitment for Initial Contract Term	Will SDB/SB be used for Options/Renewals? (YES/NO)

**APPENDIX H
SMALL DIVERSE AND SMALL BUSINESS
LETTER OF INTENT**

[REDACTED]

[REDACTED]

Dear [REDACTED]

This letter serves as confirmation of the intent of this offeror to utilize [REDACTED]
[REDACTED] on the above-referenced RFP issued by the [REDACTED]

If Offeror is the successful vendor, the referenced SDB/SB shall perform the following work, goods or services during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

[REDACTED]

Identify the specific work, goods or services the SDB/SB will perform below:

[REDACTED]

These services represent [REDACTED] of the total cost in the Offeror's cost submittal for the initial term of the contract. Dependent on final negotiated contract pricing and actual contract usage or volume, it is expected that the above-referenced SDB/SB will receive an estimated [REDACTED]
[REDACTED] during the initial contract term.

The above-referenced SDB/SV represents that it meets the small or small diverse business requirements set forth in the RFP and all required documentation has been provided to the Offeror for its SDB/SB submission.

We look forward to the opportunity to serve the [REDACTED] on this project. If you have any questions concerning our small business or small diverse business commitment, please feel free to contact me at the number below.

Sincerely,

Acknowledged,

[REDACTED]

APPENDIX I

MODEL FORM OF SMALL DIVERSE AND SMALL BUSINESS SUBCONTRACTOR AGREEMENT

This Subcontractor Agreement ("Subcontract") is made effective as of _____, 20__, by and between _____, ("Contractor") and _____, a Small Diverse Business or Small Business ("Subcontractor") (collectively referred to as the "Parties").

RECITALS

Contractor has entered into a contract dated _____ (the "Prime Contract") with the Department of _____ of the Commonwealth of Pennsylvania ("Commonwealth"). Under the Prime Contract, Contractor has agreed to provide certain supplies, services or construction ("Services") to the Commonwealth.

In connection with the Procurement leading to the Prime Contract, Contractor and Subcontractor entered into a letter agreement dated _____ ("Letter of Intent") whereby the Contractor committed a certain percentage of work ("Small Diverse Business or Small Business Commitment") under the Prime Contract to the Subcontractor.

As contemplated by the Letter of Intent and in accordance with the provisions of the Procurement and Prime Contract, the Parties have agreed to enter into this Subcontract to fulfill the Small Diverse Business or Small Business Commitment expressed in the Letter of Intent and as required by the Prime Contract.

DEFINITIONS

The following words and terms when used in this Subcontract shall have the following meanings:

Bureau – The Department's Bureau of Diversity, Inclusion and Small Business Opportunities.

Contracting Officer – The person authorized to administer and make written determinations for the Commonwealth with respect to the Prime Contract.

Department – The Department of General Services of the Commonwealth of Pennsylvania.

Issuing Office – The department, board, commission or other agency of the Commonwealth of Pennsylvania that issued the Procurement.

Procurement – The Invitation for Bids, Request for Quotes, Request for Proposals or other solicitation and all associated final procurement documentation issued by the Commonwealth to obtain proposals from firms for award of the Prime Contract.

Small Business – A business in the United States which is independently owned, not dominant in its field of operation, employs no more than 100 full-time or full-time equivalent employees, and earns less than \$7 million in gross annual revenues for building design, \$20 million in gross annual revenues for sales and services and \$25 million in gross annual revenues for those businesses in the information technology sales or service business.

Small Diverse Business – A Department-verified minority-owned small business, woman-owned small business, veteran-owned small business, service-disabled veteran-owned small business, LGBT-owned small business, or disability-owned small business.

AGREEMENT

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the Parties hereby agree as follows:

1. Subcontractor Representations. Subcontractor represents and warrants to Contractor as follows:

(a) Subcontractor is self-certified as a Small Business in accordance with the requirements and procedures established by the Bureau of Diversity, Inclusion and Small Business Opportunities; [Subcontractor is also verified as a Small Diverse Business by the Bureau of Diversity, Inclusion and Small Business Opportunities in accordance with the requirements and procedures established by the Bureau;]

(b) Subcontractor possesses the necessary knowledge, experience, expertise, capital, resources and personnel required to perform the Services it will provide under this Subcontract;

(c) Subcontractor (i) is duly organized, validly existing and in good standing under the laws of its state of incorporation or organization, (ii) has the power and authority to own its properties and to carry on business as now being conducted, and (iii) has the power to execute and deliver this Subcontract;

(d) The execution and performance by Subcontractor of the terms and provisions of this Subcontract have been duly authorized by all requisite action, and neither the execution nor the performance of this Subcontract by Subcontractor will violate any provision of law, any order of any court or other agency of government, the organizational documents of Subcontractor or any indenture, agreement or other instrument to which Subcontractor is a party, or by which Subcontractor is bound, or be in conflict with, result in a breach of, or constitute (with due notice or lapse of time or both) a default under, or except as may be provided by this Subcontract, result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of Subcontractor pursuant to, any such indenture agreement or instrument;

(e) Subcontractor has obtained all licenses, permits and approvals required to perform the Services it will provide under this Subcontract; and

(f) Subcontractor is not under suspension or debarment by the Commonwealth or any other governmental entity, instrumentality or authority.

2. Contractor Representations. Contractor represents and warrants to Subcontractor as follows:

(a) Contractor (i) is duly organized, validly existing and in good standing under the laws of its state of incorporation or organization, (ii) has the power and authority to own its properties and to carry on business as now being conducted, and (iii) has the power to execute and deliver this Subcontract;

(b) The execution and performance by Contractor of the terms and provisions of this Subcontract by Contractor have been duly authorized by all requisite action, and neither the execution nor the performance of this Subcontract will violate any provision of law, any order of any court or other agency of government, the organizational documents of Contractor or any indenture, agreement or other instrument to which Contractor is a party, or by which Contractor is bound, or be in conflict with, result in a breach of, or constitute (with due notice or lapse of time or both) a default under, or except as may be provided by this Subcontract, result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of Contractor pursuant to, any such indenture agreement or instrument;

(c) Contractor has obtained all licenses, permits and approvals required to perform the Services to be provided by Contractor under the Prime Contract; and

(d) Contractor is not under suspension or debarment by the Commonwealth or any other governmental entity, instrumentality or authority.

3. Relationship of the Parties. The provisions of this Subcontract are not intended to create, nor shall be deemed or construed to create, any joint venture, partnership or other relationship between Contractor and Subcontractor, other than that of independent entities contracting with each other solely for the purpose of carrying out the provisions of this Subcontract. Neither of the Parties to this Subcontract, nor any of their respective employees, agents, or other representatives, shall be construed to be the agent, employee or representative of the other party. Neither party shall have the authority to bind the other party, nor shall a party be responsible for the acts or omissions of the other party, unless otherwise stated in this Subcontract. Similarly, the Parties expressly acknowledge that neither the Contractor nor the Subcontractor is an agent, employee or representative of the Commonwealth and each party covenants not to represent itself accordingly.

4. Prime Contract Flow-Down.

(a) General. This agreement is a subcontract under the Prime Contract and all provisions of the Prime Contract and any amendments thereto applicable to the Services being performed by the Subcontractor shall extend to and be binding upon the Parties as part of this Subcontract.

(b) Specific. The Parties agree to comply with the following provisions of the Prime

Contract, which are incorporated herein by reference:

- (1) The Americans with Disabilities Act Provisions.
- (2) Nondiscrimination/Sexual Harassment Clause.
- (3) Contractor Integrity Provisions.
- (4) Contractor Responsibility Provisions.

(c) **Termination.** Should the Prime Contract be terminated pursuant to the terms and conditions provided in the Procurement, such termination shall have the same effect on this Subcontract. Payment for Services provided as of the date of termination must be made in accordance with the Section 13 of this Subcontract.

(d) **Audit Provisions.** The Commonwealth shall have the right, at reasonable times and at a site designated by the Commonwealth, to audit the books, documents, and records of the Parties to the extent that the books, documents, and records relate to the Parties' compliance with the provisions set forth in subsection (b) above or to the Small Diverse Business or Small Business Commitment effectuated through this Subcontract. The Parties shall preserve such books, documents, and records for a period of three years from the date of final payment hereunder. The Parties shall give full and free access to all such records to the Commonwealth and/or its authorized representatives.

5. **Order of Precedence.** The Letter of Intent, Procurement and Prime Contract are incorporated herein by reference into this Subcontract. In the event of any conflict or inconsistency among the individual components of this Subcontract, such conflict or inconsistency shall be resolved by observing the following order of precedence:

- (a) This Subcontract;
- (b) The Letter of Intent;
- (c) The Prime Contract; and
- (d) The Procurement.

6. **Further Action.** The Parties shall take such actions and complete, execute and deliver any and all documents or instruments necessary to carry out the terms and provisions of this Subcontract, to effectuate the purpose of this Subcontract, and to fulfill the obligations of each party hereunder.

7. **Description of Services.** Subcontractor will perform the following Services for the Contractor which Contractor is obligated to provide to the Commonwealth under the Prime Contract:

[DESCRIBE IN DETAIL THE SPECIFIC SUPPLIES, SERVICES OR CONSTRUCTION THE SUBCONTRACTOR WILL PROVIDE OR PERFORM]

8. Small Diverse Business or Small Business Commitment. The above-referenced Services represent ___ % of the final negotiated total cost for the initial term of the Prime Contract. Any proposed change to the Small Diverse Business or Small Business Commitment must be submitted in writing to the Bureau which will make a recommendation to the Commonwealth Contracting Officer regarding a course of action.

9. Performance of Services. Subcontractor may not subcontract more than 50% of the work subcontracted to it hereunder without written permission from the Bureau. Subcontractor will perform the Services strictly in accordance with any applicable plans and specifications as contained in the Prime Contract and the reasonable deadlines set by Contractor in view of the requirements of the Prime Contract, and in a good workmanlike manner consistent with industry standards, meeting all applicable local, state and federal laws, regulations and policies.

10. Location of Services. Subcontractor will provide the Services at the following address(es):

11. Timeframe for Performance of Services. The Services will be provided by Subcontractor during the initial term of the Prime Contract, and during any extensions, options or renewal periods of the Prime Contract exercised by the Commonwealth, as more specifically set forth below:

[IDENTIFY THE SPECIFIC TIME PERIODS DURING THE INITIAL CONTRACT TERM AND EXTENSIONS, OPTIONS AND RENEWALS WHEN THE SUBCONTRACTOR WILL PERFORM COMPONENT SERVICES]

12. Pricing of Services. Subcontractor shall provide or perform the Services at the pricing specified in Exhibit ___ to this Subcontract. [ATTACH A BILL OF MATERIALS, RATE CARD OR OTHER APPROPRIATE COST SHEET COVERING THE SERVICES TO BE PROVIDED.]

13. Payment for Services. Contractor shall exert reasonable and diligent efforts to collect prompt payment from the Commonwealth. Contractor shall pay Subcontractor in proportion to amounts received from the Commonwealth which are attributable to the Services performed by Subcontractor. Contractor shall pay Subcontractor within fourteen (14) days after the Contractor receives such payment from the Commonwealth, unless the parties expressly agree upon a different payment schedule or structure as set forth below:

14. Utilization Reports. Both the Contractor and Subcontractor shall complete Quarterly Utilization Reports (or similar type documents containing the same information) and submit them to the Contracting Officer and to the Bureau within ten (10) business days at the end of each quarter. This information will be used to determine the actual dollar amount paid to Subcontractor and will also serve as a record of fulfillment of Contractor's Small Diverse Business and Small Business Commitments. If there was no activity during the quarter, then the form must be completed by stating "No activity in this quarter." A late fee of \$100.00 per day may be assessed against the Contractor if its Utilization Report is not submitted in accordance with the schedule above.

15. Change Orders. If the Commonwealth issues any change order or other formal contract instrument either expanding or limiting the work to be performed under the Prime Contract, the Parties shall accept such Change Orders. Contractor agrees to provide Subcontractor with written notice of any such change orders that affect the Services to be provided by the Subcontractor hereunder as soon as practical after Contractor receives such notice. Any resulting increase or decrease in the Services, Small Diverse Business or Small Business Commitment provided for in Paragraphs 7 or 8 above must be in writing, mutually agreed to, and signed by both Parties and communicated to the Bureau. If the Parties are unable to reach an agreement regarding any adjustment to the Services, Small Diverse Business or Small Business Commitment necessitated by a Commonwealth Change Order, the Parties must submit the matter in writing to the Bureau which will make a recommendation to the Contracting Officer regarding a course of action.

16. Force Majeure. Neither party will incur any liability to the other if its performance of any obligation under this Subcontract is prevented or delayed by causes beyond its control and without the fault or negligence of either party. Causes beyond a party's control may include, but are not limited to, acts of God or war, changes in controlling law, regulations, orders or the requirements of any governmental entity, severe weather conditions, civil disorders, natural disasters, fire, epidemic and quarantines, general strikes throughout the trade, and freight embargoes. The existence of such causes beyond a party's control shall extend the period for performance to such extent as may be necessary to enable complete performance in the exercise of reasonable diligence after the causes have been removed.

17. Dispute Resolution.

(a) The Parties will attempt to resolve any dispute arising out of or relating to this Subcontract through friendly negotiations.

(1) The Parties expressly acknowledge and confer upon the Bureau and Contracting Officer the authority to adjudicate disputes that the Parties cannot resolve amicably concerning the Parties' compliance with their Small Diverse Business and Small Business Commitments as provided in the Prime Contract and this Subcontract.

(2) The Bureau may recommend to the Contracting Officer a range of sanctions it deems appropriate if the Bureau determines a party has failed to satisfy or perform its Small Diverse Business or Small Business commitment. Such sanctions include, but are not limited to, one or more of the following: a determination that the party is not responsible under the Contractor Responsibility Program; withholding of Prime Contract and/or Subcontract payments; suspension or termination of the Prime Contract and/or Subcontract together with consequential damages; revocation of the party's Small Business self-certification status and/or Small Diverse Business verification status; and/or suspension or debarment of one or both parties from future contracting opportunities with the Commonwealth.

(3) The Parties' acknowledge that their prior performance in meeting their Small Diverse Businesses and Small Businesses contractual obligations will be considered by the Bureau during future procurement scoring processes. To the extent a party has failed to meet prior contractual commitments, the Bureau may recommend to the Issuing Office that the party be determined non-responsible for the limited purpose of eligibility to receive SDB/SB points or consideration as a qualified Small Diverse Business or Small Business.

(b) Nothing herein shall be construed to prevent either party from seeking such relief as provided by law in a court or tribunal of competent jurisdiction.

18. Notices. Any written notice to any party under this Subcontract shall be deemed sufficient if delivered personally, or by facsimile, telecopy, electronic or digital transmission (provided such delivery is confirmed), or by a recognized overnight courier service (e.g., DHL, Federal Express, etc.) with confirmed receipt, or by certified or registered United States mail, postage prepaid, return receipt requested, and sent to the following:

If to Contractor:

If to Subcontractor:

19. Waiver. No waiver by either party of any breach of this Subcontract shall be deemed to waive any other breach. No acceptance of payment or performance after any breach shall be deemed a waiver of any breach. No failure or delay to exercise any right by a party upon another's default shall prevent that party from later exercising that right, nor shall such failure or delay operate as a waiver of any default.

20. Severability. If any provision of this Subcontract shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of this Subcontract is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

21. Assignment. Neither party may assign or transfer this Subcontract without the prior written consent of the Commonwealth. If Contractor's Prime Contract with the Commonwealth is assigned to another contractor, the new contractor must maintain the Small Diverse Business and Small Business Commitment set forth in the Prime Contract as implemented through this Subcontract.

22. Applicable Law. This Subcontract shall be governed by the laws of the Commonwealth of Pennsylvania.

23. Entire Agreement. This Subcontract constitutes the entire agreement of the Parties regarding the subject of this Subcontract as of the date of execution. No other agreement or understandings, verbal or written, expressed or implied, are a part of this Subcontract unless specified herein.

24. Amendment. This Subcontract may be modified or amended only if made in writing and signed by both Parties. Any proposed change to the Contractor's Small Diverse Business or Small Business Commitment to Subcontractor must be submitted in writing to the Bureau which will make a recommendation to the Contracting Officer regarding a course of action.

25. Binding Effect. This Subcontract shall be binding upon, and inure to the benefit of, the Parties and their respective heirs, representatives, successors and assigns.

26. Counterparts. This Subcontract may be executed by the Parties in counterparts, each of which together shall be deemed an original but all of which together shall constitute one and the same instrument. A party's delivery of a duly executed signature page of this Subcontract in electronic format shall have the same force and effect as delivery of an original signature page.

ADDITIONAL TERMS AND CONDITIONS

[THE PARTIES MAY INCLUDE ADDITIONAL TERMS AND CONDITIONS APPROPRIATE FOR THE SERVICES TO BE PROVIDED SO LONG AS THEY ARE COMMERCIALY REASONABLE TERMS FOR THE APPLICABLE BUSINESS OR INDUSTRY, ARE NO LESS FAVORABLE THAN THE TERMS OF THE PRIME CONTRACT, AND DO NOT PLACE DISPROPORTIONATE RISK ON THE SMALL DIVERSE BUSINESS OR SMALL BUSINESS RELATIVE TO THE NATURE AND LEVEL OF THE SMALL DIVERSE BUSINESS' OR SMALL BUSINESS' PARTICIPATION IN THE PROJECT. SUCH TERMS MAY INCLUDE:

Background Checks
Confidentiality/Disclosure of Information
Data Security

Insurance
Invoicing Requirements
Environmental Protection
Intellectual Property Rights
Record Retention/Audits
Service Level Agreements (SLAs) (consistent with Prime Contract SLAs)
Public Works Construction Requirements (including Bonding, E-Verify, Prevailing Wage, and Prompt Payment provisions)

IN WITNESS WHEREOF, the Parties hereto have caused this Subcontract to be executed by their duly authorized officers as set forth below.

Contractor

Subcontractor

Insert Company Name

Insert Company Name

By: _____
Signature

By: _____
Signature

Printed Name

Printed Name

Title

Title

Date

Date

APPENDIX J

PSERS' Investment Portfolio Asset Allocation as of June 30, 2018 (Unaudited)

Asset Class	Market Value (In millions)	% of Total	Target Allocations	Policy Ranges
Publicly Traded Global Equity	\$11,564.7	20.8%		
Private Markets	\$8,117.8	14.6%		
Total Equities	\$19,682.4	35.4%	34.00%	+/- 10.0%
Investment Grade	\$4,766.4	8.6%		
Credit-Related	\$5,317.4	9.6%		
Inflation Protected	\$7,876.8	14.5%		
Total Fixed Income	\$18,960.7	32.5%	30.00%	+/- 10.0%
Master Limited Partnership (MLP)	\$2,813.0	4.7%		
Infrastructure	\$1,535.3	2.8%		
Commodities	\$4,267.7	7.7%		
Real Estate	\$1,467.0	2.6%		
Total Real Assets	\$11,500.0	20.5%	25.00%	+/- 10.0%
Risk Parity	\$5,439.2	9.8%	10.00%	+/- 5.0%
Alternative Return	\$5,611.3	10.2%	10.00%	+/- 4.0%
Cash and Cash Equivalents*	\$2,457.8	4.4%	3.00%	+/- 3.0%
GROSS INVESTMENT PORTFOLIO	\$68,332.6	116.8%	117.00%	
Financing	(\$8,249.5)	(14.6%)	(17.0%)	+/- 9.0%
NET INVESTMENT PORTFOLIO	\$58,583.1	100.4%	100.00%	
Net Other Asset and Liabilities	\$1,142.6			
PSERS TOTAL NET ASSETS	\$59,725.7			

* - includes Cash, Cash Equivalents, and net asset value accounting adjustments





Proposal for Investment Consulting Services

RFP Number: PSERS RFP 2018-6

Technical Submittal

Public School Employees' Retirement System

February 19, 2019

Contact:

Claire Shaughnessy

Partner

Merritt 7 Corporate Park, Building 201

Norwalk, CT 06851

+1.203.523.8163

claire.shaughnessy@aon.com

aon.com

February 19, 2019

Ms. Cathy Gusler
Public School Employees' Retirement System
5 North 5th Street
Harrisburg, PA 17101

Re: RFP#: PSERS RFP 2018-6

Dear Cathy,

Thank you for including Aon Hewitt Investment Consulting, Inc., an Aon Company as a candidate in your search for Investment Consulting Services for the Commonwealth of Pennsylvania Public School Employees' Retirement System ("PSERS"). We are very appreciative of the opportunity to re-bid to be the general consultant for PSERS. As the incumbent general consultant, we believe that Aon Hewitt Investment Consulting (AHIC) is uniquely positioned and has the right experience and the capabilities necessary to be an effective long-term partner for PSERS' investment consulting needs. The Aon team of experts PSERS has relied on over the past five years of Claire Shaughnessy, Phil Kivarkis, Rian Akey, and Jeanna Cullins will continue to partner with PSERS to provide a deep and experienced team across all aspects of the general consultant engagement including manager selection, asset allocation, operational due diligence and fiduciary and governance services. We are happy to add Kevin Vandolder, DC Client Practice Leader, as the lead consultant for the new PSERS Defined Contribution Trust.

Our firm has a long history of serving public plans, so we understand the challenges that come with that important responsibility. We believe that one of our key strengths and differentiating capabilities is our ability to provide comprehensive asset allocation, investment policy, and implementation advice to our clients drawing from a global well of knowledge, experience, research, and quantitative analysis. But our even greater experience lies in tailoring that advice to each individual client. The annual asset liability review and stress testing Aon conducts on the PSERS Fund is an example of the customized, tailored approach we take to every client engagement. All advice that we provide is customized to help ensure that it's right for each public plan's circumstances, risk tolerance, and financial objectives. We believe we have brought this level of experience to PSERS and will continue to do so in the future.

Perhaps one of the most distinguishing characteristics of AHIC is the way we interact with clients. We take a genuine interest in their success. We strive to understand and appreciate the complexities of the environment in which our clients operate. As the general consultant since 2013, Aon has developed a deep appreciation of the unique challenges facing PSERS today as it seeks to continue to meet the retirement needs of its over 600,000 participants. We believe that, as fiduciaries, the best approach is a collaborative one and that the best results will come from sharing our best thinking and thoroughly vetting investment opportunities. Our advice and approach will seek to reflect this.

We are proud of our strategic partner relationship with PSERS and hope we are fortunate enough to continue. In addition to our extensive experience with public fund Defined Benefit plans, Aon has been working with public fund defined contribution plans for over 40 years and works and advises 32 public fund retainer clients with total assets of \$1.518 billion as of June 30, 2018.

We recognize the additional time and cost involved in re-issuing the general consultant RFP and thank PSERS for its patience and for the opportunity to re-bid. We greatly value our partnership and have adjusted our fee proposal for the first year to compensate PSERS for the additional cost of re-issuing the RFP. We are committed to providing the necessary resources to fully support PSERS and their needs. Our proposal is being signed by our NA Chief Executive Officer, Stephen Cummings. Steve is authorized to submit and represent the information

contained in this response on behalf of AHIC. In accordance with our standard practice, this bid and any award is subject to the final approval of Aon leadership and subsequent execution of a definitive agreement between us.

Stephen Cummings, NA Chief Executive Officer

Aon Hewitt Investment Consulting, Inc., an Aon company
200 East Randolph Street, Suite 1500
Chicago, IL 60601
t + 1.847.442.0064
f +1.312.381.1368
steve.cummings@aon.com

Included in the **Appendix** are Aon Hewitt Investment Consulting's Form ADV, Parts 2A and 2B.

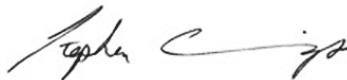
Please contact us if there is any additional information you require or if we can make this proposal more responsive to your needs. We hope to have the opportunity to discuss our capabilities in more detail with you in person in the near future. Thank you again for your consideration.

Sincerely,

Aon Hewitt Investment Consulting, Inc.



Claire Shaughnessy
Partner



Stephen Cummings
NA Chief Executive Officer

Table of Contents

APPENDIX B	1
Executive Summary	2
Part III: Technical Submittal	5
III-1. Requested Services: Fund	5
III-2. Requested Services: Trust	9
III-3. Requirements	10
III-4. Mandatory Minimum Qualifications	14
III-5. Offeror's Qualifications	17
III-6. Personnel Qualifications	40
III-7. Soundness of Approach	50
III-8. Miscellaneous	99
III-9. References	107
III-10. Work Plan	110
III-2. Requested Services: Trust	120
III-11. Objectives and Additions to Standard Terms and Conditions	122
APPENDIX C	123
APPENDIX D	124
APPENDIX E	125
Appendix	126
A. AHIC Form ADV, Part 2A and 2B	
B. DR/BC Ongoing Operations Overview	
C. AHIC's Manager Buy-Rated Record	
D. Research Papers	
E. Q1 2019 Economic and Investment Views	
F. Quarterly Investment Outlook – January 2019	
G. AHIC's Code of Ethics	
H. Sample Investment Policy Statement	
I. Sample Asset-Liability Study	
J. Sample Operational Due Diligence Summary Assessment	
K. Sample InBrief Report	
L. Sample Quarterly Performance Report	
M. Sample Monthly Flash Report	
N. PSERS' Client Portal Presentation	
O. Asset Allocation by Manager Report	

APPENDIX B

**PROPOSAL COVER SHEET
COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
RFP# PSERS RFP 2018-6**

Enclosed in three separately sealed submittals is the proposal of the Offeror identified below for the above-referenced RFP:

Offeror Information:	
Offeror Name	Aon Hewitt Investment Consulting, Inc.
Offeror Mailing Address	200 E. Randolph St., Suite 1500 Chicago, IL 60601
Offeror Website	www.aon.com
Offeror Contact Person	Claire Shaughnessy
Contact Person's Phone Number	+1.203.523.8163
Contact Person's Facsimile Number	+1.203.523.6750
Contact Person's E-Mail Address	claire.shaughnessy@aon.com
Offeror Federal ID Number	36-3109431
Offeror SAP/SRM Vendor Number	383098

Submittals Enclosed and Separately Sealed:	
<input checked="" type="checkbox"/>	Technical Submittal <input checked="" type="checkbox"/> Domestic Workforce Utilization Certification
<input type="checkbox"/>	Small Diverse Business and Small Business Participation Submittal <input type="checkbox"/> Small Diverse Business and Small Business Participation Submittal Form <input type="checkbox"/> Small Diverse Business and Small Business Letter(s) of Intent
<input checked="" type="checkbox"/>	Cost Submittal

Signature	
Signature of an official authorized to bind the Offeror to the provisions contained in the Offeror's proposal:	
Printed Name	Steve Cummings
Title	NA Chief Executive Officer, Aon Hewitt Investment Consulting

FAILURE TO COMPLETE, SIGN AND RETURN THIS FORM WITH THE OFFEROR'S PROPOSAL MAY RESULT IN THE REJECTION OF THE OFFEROR'S PROPOSAL

Executive Summary

Aon Hewitt Investment Consulting

We believe Aon Hewitt Investment Consulting, Inc. (“AHIC”) is well-qualified to execute the requested scope of work. We are a full-service investment consulting firm that serves a wide array of clients, including public retirement systems, state investment boards, nonprofits, state and federal oversight entities, corporate pension funds and defined contribution plans, endowments, and foundations. Our history goes back over 40 years through our legacy organizations. Aon Hewitt Investment Consulting is one of the largest firms of its type in the U.S.¹, with clients having combined assets of \$2.279 trillion (as of 6/30/2018, represents \$2,164 B in advised US retainer non-discretionary assets and \$115 B in discretionary assets under management). While our size affords us efficiencies and depth of resources, we pride ourselves on high-touch, client centric consulting. The proposed consulting team for the Commonwealth of Pennsylvania Public School Employees’ Retirement System (PSERS) embodies this philosophy.

We have carefully managed the growth in our firm and acquired specific experience to cater to the wide range of specialized services that government entities seek. The quality and depth of our professional resources, alignment of our interests with our clients, and wide range of experience we have developed are well respected in the industry.

We Are Experienced Investment Consultants

Our investment knowledge is solid and based on rigorous research and analysis. We are proud of the steady stream of topical research papers we have published that the institutional investment community values. Many times the topics we cover come from challenges raised or suggestions made by our clients. In that way, we benefit not only our clients but also the larger investment community.

We have internal actuarial expertise available to our investment consultants. We have an appreciation of the financial and investment challenges that the PSERS’ Board and PSERS’ Investment Professionals face, and we believe we have the experience to navigate such challenges. By leveraging our investment and actuarial experience and our comprehensive analytic and modeling tools, databases, and decision resources, we will work to ensure that you receive investment consulting services that meet your needs².

We Understand the Public Sector

We understand the many challenges and significant opportunities facing public retirement systems and state investment boards. We appreciate the funding challenges and the pressure to reach ever-increasing investment returns while also being mindful of risks. We understand the “fishbowl” environment in which public funds operate, where investment decisions are far more visible than they would be with a private-sector entity. We understand and fully appreciate that governing a public retirement system and managing its assets are difficult jobs.

¹Source: Pensions & Investments 2017 Consultant Survey. Pension & Investments, 2017 Investment Consultant Survey, 68 firms participated in the survey. The rankings are based on the industry data reported by Pensions & Investments as of 03/31/2017. The rankings are based on the worldwide assets under management in investment outsourcing programs reported by each advisor who supplied data to Pensions & Investments. The survey does not report on any undisclosed facts about any of the advisors who participated in the survey that could call into question the validity of the underlying data. The survey does not state or imply that the rankings represent the quality of advice provided by any advisor who participated in the survey. The survey discloses the complete list of advisors who participated in the survey. The data may not represent any one client’s experience because the data reflects the cumulative asset growth across the entire sampling of the clients of each advisor who participated in the survey. The data is not indicative of the future performance of advisors who participated in the survey. The survey was conducted by Pensions & Investments. No advisor paid a fee to participate in the survey.

²Actuarial services provided by an Aon Hewitt Investment Consulting, Inc. affiliate.

Aon has spoken extensively regarding the unique needs of public pensions and has recently presented to the Pennsylvania Public Pension Management and Asset Review Commission (in September of 2018) as an expert witness on the topic of asset allocation principles and trends in public plans. Our extensive knowledge of public plans given our long experience working with many plans enables us to provide forward-looking advice regarding many of the challenging topics facing public plan boards such as asset allocation, investment structures (active/passive), fee reduction ideas and governance structures.

We Promote Governance Best Practices

AHIC has demonstrated a genuine sensitivity to the complex elements of good governance processes. This is reflected in the way we approach our work. We first seek to fully understand the way your investment decisions are made, what responsibilities are retained by the Board and what are delegated, how oversight and monitoring activities are performed, and how you define success.

With our clients, we don't just look at numbers. We look at policies, procedures, accountability, and future planning. AHIC is experienced in problem solving at staff and board levels and has significant experience in both strategic and tactical contexts. We are skilled in assisting our clients to achieve smooth, efficient decision making, resolving concerns promptly, helping our clients to implement changes on schedule and on budget, and advising complex portfolios forward as planned.

Aon understands PSERS governance needs. Jeanna Cullins, Leader of the AHIC's Fiduciary Practice, has worked with the Board's Governance Working Group and PSERS' Investment Professionals to update PSERS' Investment Policy Statement, Objectives and Guidelines and more clearly define the investment governance structure of PSERS. In addition, Jeanna and her team have conducted fiduciary training sessions with new members of the Board. Given this existing relationship and prior work, Aon can continue PSERS efforts to re-think its governance structure as Pennsylvania pursues potential governance changes such as consolidating its investment office with SERS and other governance topics without any loss of time.

Our Research Capabilities Benefit Our Clients

We have structured our firm to focus heavily on research that's relevant to our clients. This includes a dedicated global asset allocation team, an investment policy services group, a global investment management team, and fiduciary services. These teams focus their efforts on issues such as market research, investment program structure, portfolio modeling, investment manager research, policy development, and governance best practices.

Producing thoughtful research papers is highly valued and rewarded in our firm. Therefore, research isn't merely an afterthought or a secondary function for our investment professionals—it is core to our business.

Our research capabilities are not limited to understanding the investment capabilities of asset management firms, but includes our dedicated operational due diligence team which is led by Rian Akey. Rian and his team conduct comprehensive operational due diligence on all Buy rated investment products and have extensive experience evaluating the operations of PSERS public market managers. This experience also includes evaluating the middle and back office of internal investment organizations which PSERS can utilize to conduct the operational risk gap analysis outlined in PSERS' scope of services.

Our Databases and Tools Are Extensive

Over 23,000 investment manager strategies and thousands of market indices are covered in our databases (as of September 30, 2018). This means we offer clients broad coverage of the investment manager universe and have access to return and portfolio data not only for the strategies included in their plans but also for appropriate

market indices. We also have sophisticated tools that allow us to screen, monitor, analyze, and understand investment products and benchmarks.

We Offer PSERS an Experienced Team

As our firm has continued to expand, we have made a conscious effort to ensure that the complex needs of public fund plan sponsors are met. Our professional staff includes industry experts spanning the full range of consulting disciplines, including asset/liability modeling, asset allocation studies, investment policy development, analytical research, portfolio construction, investment manager searches and monitoring, custodian bank searches and monitoring, governance matters, risk analysis, and regulatory compliance. We do in-house training where we share information among partners and senior-level consultants. And we are constantly making investments to improve our capabilities.

The primary consultant team of Claire Shaughnessy, Amanda Janusz and Darren Moran have worked with PSERS since the inception of our strategic partnership in 2013. Jeanna Cullins, Lead Fiduciary Consultant and Rian Akey, Global Head of Operational Due Diligence have worked with PSERS on several projects over the past three years. We have added Kevin Vandolder as the Lead Defined Contribution Consultant to lead Aon's team in providing the expanded consultant services for the new Defined Contribution Plan. All team members selected for this engagement have consulted with public funds with similar missions and goals. They work well together and with boards and staffs. They have assisted clients in developing and monitoring strong investment programs. They will be readily accessible, offer you their best independent judgment, and work tirelessly on your behalf.

We believe this opportunity with PSERS is one that many consulting firms would naturally be interested in. You have a large fund with a good reputation. We expect the competition to be extensive, but we hope you will find that our knowledge, experience, and passion for excellence are second to none.

Part III: Technical Submittal

III-1. Requested Services: Fund

The contractor will provide non-discretionary investment consulting and/or performance measurement services for the period June 1, 2019 through May 31, 2024.

A. In providing Consulting Services for the Fund, and for all major asset classes, the consultant will:

- 1. Conduct a comprehensive review and analysis of investment objectives, policies, asset allocation, and portfolio structure, inclusive of defining an investable risk beta portfolio, and recommend changes, if appropriate.**
- 2. Review the adequacy of PSERS' Investment Professionals and resources, and make recommendations on PSERS' Investment Professionals and resource changes, if any.**
- 3. Work with PSERS' Investment Professionals and the actuary to conduct an asset/liability study annually for each calendar year and present the results to the Board in March of the following year.**
- 4. Work with PSERS' Investment Professionals to develop an appropriate investment management structure for the Fund and each asset class that considers the role of active versus passive strategies, investment management styles, and separation of alpha from beta under different market conditions.**
- 5. Recommend appropriate performance and risk benchmarks for individual portfolios, each asset class, and for the total Fund.**
- 6. Review and make recommendations regarding individual portfolio risk guidelines at least annually.**
- 7. Recommend suitable investment opportunities and practical implementation methods; research supporting such recommendations must have been completed within the prior 12 months.**
- 8. Recommend appropriate investment strategies, tactics, procedures, and practices.**
- 9. Provide research reports on asset allocation, investment issues, and provide description and evaluation of alternative approaches.**
- 10. Provide information on market conditions and explain their impact on the Fund's investments.**
- 11. Provide PSERS with information on high conviction new managers at the earliest possible juncture to permit PSERS to secure capacity and negotiate terms with promising emergent managers.**
- 12. Assist PSERS' Investment Professionals in conducting public market investment manager searches and facilitate the hiring of suitable institutional quality managers, including:**
 - a. providing opportunities and expense reimbursement for PSERS to jointly meet and evaluate new managers at industry conferences;**

- b. providing a list of potential institutional quality managers appropriate for the mandate being considered;*
 - c. conducting interviews with potential managers at PSERS;*
 - d. conducting on-site due diligence meetings with potential managers prior to their selection; and*
 - e. providing assistance with the contract/fee negotiations.*
- 13. Provide on-going monitoring and oversight reports for all of PSERS' public market investment managers, including:**
- a. advance notice to PSERS of in-person meeting with investment managers in the Fund's portfolio;*
 - b. analysis of the manager's absolute and relative performance in relation to benchmarks, investment objectives, and peer groups, including analysis of ex-post risk-adjusted performance;*
 - c. an analysis of attribution, holdings, style, and risk;*
 - d. updated research on each investment manager in the Fund's portfolio updated at least once every 18 months to include a review of investment performance, process, and the manager's organization;*
 - e. conduct on-site investment and operational due diligence meetings with current investment managers a minimum of every three years;*
 - f. advice on manager retention/termination; and*
 - g. assist in developing a formal manager review process.*
- 14. Advise PSERS' Investment Professionals and the Board about new developments in investment management techniques and portfolio management strategies. Analyze how new techniques might improve the investment program and whether they should be considered for implementation.**
- 15. Make available all firm research, including proprietary research, regardless of the firm department in which it was created. Research must be made available by electronic system.**
- 16. Provide access and consultation with the firm's research staff.**
- 17. Meet with the Board to report on investment matters. Generally, there are six regularly scheduled Board meetings annually. Special meetings may be scheduled as needed.**
- 18. Report the performance results to the Board quarterly, including relative results versus established benchmarks, results versus other public defined benefit pension plans, and the returns relative to the risks taken.**
- 19. Maintain and provide access to a database of U.S. and non-U.S. investment managers, including their philosophies, processes, organizations, performance, fees, and clients.**

20. Provide and maintain a secure, client-facing, web-based platform that is frequently updated and continuously available to PSERS that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools, allowing PSERS to:

- a. formulate investment policy and implement strategies;**
- b. monitor and evaluate individual portfolio, asset class, and total fund performance, risk, and attribution analytics;**
- c. formulate investment policy and implement strategies;**
- d. develop asset allocation and rebalancing recommendations;**
- e. select and evaluate public market investment managers, including public market manager research and consultant ratings;**
- f. analyze and optimize manager teams; and,**
- g. compare the Fund performance, including ex-post risk-adjusted performance, at the asset class and total fund levels to various peer groups.**

It is expected that at least 20 years of the Fund's historical performance data, by investment portfolio, asset class, and at the total fund level will be included and that the database will be updated on a monthly basis. The foregoing services shall be made available directly to PSERS through CONSULTANT's proprietary tools or indirectly through licensed third party applications.

21. Provide (a) two, one-day, or (b) one, two-day, on-site, Fiduciary and Governance training sessions per year, which can be new Board member training, Board member training, PSERS' Investment Professional training, or some combination thereof. PSERS reserves the right to videotape any training sessions for educational purposes..

22. Advise the Board and PSERS' Investment Professionals on risk-related subjects (e.g., risk measurement, risk mitigation).

23. Advise the Board and PSERS' Investment Professionals on fiduciary and governance related subjects as requested by PSERS, including the following items:

- (a) Provide advice and insights, as may be requested by PSERS, on public pension fund industry common and best practices;**
- (b) Assist as may be requested by PSERS with the development of new Board member orientation materials and conduct orientation sessions;**
- (c) Review and make recommendations, consistent with industry best practices, regarding clarity and documentation of the Board's governance framework, including the Investment Policy Statement ("IPS"), Board and Committee Charters, Delegations of Authority, investment implementation policies and procedures, etc.;**
- (d) Assist as may be requested with the development of a Board authority and delegation matrix, including:**

(i) Clarification of what authority the Board has retained, what authority has been delegated, and to whom, and

(ii) Delegations to PSERS' Investment Professionals from the Board and/or CIO.

(e) Assist, as may be requested by PSERS, with strategic planning;

(f) Develop and administer, as may be requested by PSERS, a Board annual self-evaluation process.

24. Carry out other assignments that may be specified by the Board and PSERS' Investment Professionals, as required.

25. Conduct an operational risk gap analysis which will include an evaluation of the quality of the operational policies and procedures governing PSERS' Investment Professionals. The written report will include observations, comparisons to peers and recommendations in the following areas:

(a) Investment Framework (Front, Middle, and Back Office)

(b) Trade/Transaction Execution Policies and Procedures

(d) Investment and Counterparty Risk Oversight

(e) Compliance and Audit Testing

(f) Data Governance, Technology and Business Continuity and Disaster Recovery Plans

(g) Key service provider selection and monitoring procedures.

B. In providing Performance Measurement Services for the Fund, including all major asset classes recognized by PSERS as well as individual portfolios, the consultant will:

1. Prepare a written monthly report containing the calculated total return (gross and net of fees) for asset class, portfolio management styles, and individual portfolios, and compare PSERS' calculated data with benchmarks determined by PSERS and with data for a similar population of funds by asset class and portfolio management styles for all of the public market portfolios and composites. Returns should be calculated for the following time periods: one-month, three-months, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 20-year, 25-year, 30-year, and since inception.

2. Prepare a quarterly written report containing performance measurement attribution and analysis for each asset class and individual portfolio. The report should include a historical return analysis, dollar oriented analysis, return oriented (wealth relative) analysis, excess return analysis, and risk/return analysis. Returns should be calculated for the following time periods: quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 20-year, 25-year, 30-year, and since inception.

3. Reconcile performance with both individual portfolio managers as well as the custodian bank on a monthly basis.

4. Calculate PSERS' money weighted rate of return as required by GASB 75.

5. **Create additional composites with historical returns for those composites as requested by PSERS.**
6. **Provide quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, and 10-year quartile ranking report of composite returns by fund (i.e. total fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes).**
7. **Provide consecutive year quartile ranking reports of composite returns by fund (i.e. total fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes) for the past five years.**
8. **Conduct performance attribution analysis to determine the value added by investment policy, asset allocation, and security selection.**
9. **Provide reasonable assistance to PSERS in uploading the consultant's performance data to PSERS' own investment system(s).**
10. **Prepare ex-post risk statistics and analytics for the same time periods, to the degree of depth, including benchmark comparatives, and use the same performance data from the above. Ex-post risk statistics and analytics should be robust and inclusive of industry best practices risk information.**

AHIC confirms that we can provide the scope of services listed above in III-1. Requested Services: Fund.

III-2. Requested Services: Trust

The contractor will provide consulting services for the Trust including:

1. **Review each plan's existing investment options.**
2. **Determine if the investment options offered by each plan are optimum choices given the considerations for diversification, risk and return.**
3. **Recommend additions or deletions to investment options as needed.**
4. **Provide a recommended transition plan and timeline incorporating any proposed changes in investment options.**
5. **Conduct a review of each plan's pricing structure including fund management fees and terms between the plans and the third party administrator (TPA).**
6. **Work with the TPA to review specific plan metrics, provide best practices and recommendations, and address issues that arise each quarter.**
7. **Assist in the development of investment policies for the plan.**
8. **Annually review general investment policy documents.**
9. **Periodically review goals, objectives and best practices with PSERS' investment committee.**

- 10. Recommend enhancements to PSERS' investment committee governance processes.**
- 11. Perform periodic fiduciary training.**
- 12. Monitor, review, and provide advice on legislative and regulatory issues.**
- 13. Monitor, review, and provide advice regarding best practices.**
- 14. Monitor, review, and provide advice regarding fiduciary obligations.**
- 15. Provide ongoing review of strengths and vulnerabilities in current practices.**
- 16. Serve as the liaison between the record-keeper and PSERS to maximize the vendor relationship, resolve issues with the record-keeper, and ensure contractual commitments are met.**
- 17. Lead and otherwise assist in any requisite RFP, RFQ, or RFI processes.**

AHIC confirms that we can provide the scope of services listed above in III-2. Requested Services: Trust.

III-3. Requirements

A. Emergency Preparedness.

To support continuity of operations during an emergency, including a pandemic, the Commonwealth needs a strategy for maintaining operations for an extended period of time. One part of this strategy is to ensure that essential contracts that provide critical business services to the Commonwealth have planned for such an emergency and put contingencies in place to provide needed goods and services.

- 1. Describe how you anticipate such a crisis will impact your operations.**

Pandemic situations are an obvious threat that has garnered attention and support from the highest levels of our organization. Our plans are based on an all hazard approach with incident response procedures and protocols that can be applied to any infectious disease situation.

- 2. Describe your emergency response continuity of operations plan. Please attach a copy of your plan, or at a minimum, summarize how your plan addresses the following aspects of pandemic preparedness:**

Business Continuity and Disaster Recovery

Aon's Business & Technology Resilience (BTR) program provides a global, systematic, practiced response to unplanned incidents or catastrophic events, allowing Aon to continue or quickly recover business operations. The program represents the combined disciplines of Business Continuity, Technology Resilience and Situation Response under unified leadership.

All information is hosted in our dual data centers by CyrusOne. The primary is located in Carrollton, Texas and the backup/secondary is located in Sterling, Virginia. The data centers mirror in real time replication.

Aon information technology has established and documented escalation processes to manage technology outages and/or crisis situations. These procedures are regularly tested, updated and

integrated with the Global Emergency Operations Center (GEOC) and Business Continuity Management programs.

Aon has implemented a 24x7 Global Emergency Operations Centre (GEOC) charged with immediate management and response to incidents and emergencies. The GEOC maintains lists of key contacts within critical support functions to be able to respond quickly and effectively to an incident.

All Aon locations are given a risk ranking using standard criteria to determine the required level of contingency planning. Business units determine business processes and dependencies that have the greatest potential impact in the event of a major disruption. This information forms the foundation for strategy and planning.

Each Aon business location has its own BCP. Each BCP is a documented plan that develops advance arrangements and procedures to enable a location to respond to an event in such a manner that critical business functions continue with planned levels of interruption or essential change. Each Business Continuity Plan includes prioritized business processes and process documentation, employee call trees, employee deployment and utilization, unique hardware/software requirements, client list, other business partner contacts, dependent sites, and recovery tasks.

Aon's disaster recovery plans are confidential and proprietary.

Aon's BC/DR plans are created by service, not client. Therefore, we cannot share the specific BC/DR plan.

The Business Impact Analysis (BIA) is the foundation of our Business Continuity Planning process and is key to identifying what critical business processes/activities need to be recovered following any business outage and how quickly these processes need to be recovered. Business Continuity plans detail the steps required to recover business operations. The plans adhere to standard program requirements and include:

- **Business:** processes, recovery time objectives and prioritization
- **Colleagues:** capabilities, roles and responsibilities, and teams
- **Operations:** recovery strategies, recovery tasks, and procedures
- **Resources:** applications, equipment, software, supplies, telecomm, vital records and documents
- **Communications:** internal and external contact lists

Work area recovery strategies are identified and documented during the plan development cycle and are specific to individual plans. Aon relies primarily on five types of recovery strategies during significant business interruptions:

- Move key colleagues to an unaffected Aon location(s)
- Relocate key colleagues to a contracted work area recovery center or approved alternate location(s)
- Transfer work activities to an unaffected Aon location(s)
- Have key colleagues work virtually from home or other non-office locations; and
- Stop non-essential business operations

Aon colleagues who relocate to other Aon office sites or third-party locations for temporary operations can access critical systems from anywhere on the Aon network via the secure Virtual Private Network (VPN).

Aon has a geographically diverse, high availability VPN with multiple access points and flexible bandwidth that can be increased. Colleagues who normally use a fixed desktop can quickly be issued a laptop when warranted by the situation.

We have colleagues who hold the following certifications:

- Certified Business Continuity Professional – CBCP
- Certified Business Resilience Auditor – CBRA
- Associate Fellow Business Continuity Institute – AFBC

Business Technology Resilience partners with GEOC (Global Ensuring Ongoing Operations) and GEOC partners with various multiple industry and professional groups such as FEMA. There are multiple efforts to enhance our BTR from all areas (contractual, legal etc.) to make it more resilient.

Aon has won “awards of excellence” from DRI International. DRI International is a non-profit that helps organizations prepare for and recover from disasters.

Please see the DR/BC Ongoing Operations Overview in the **Appendix** section.

a. *Employee training (describe your organization’s training plan, and how frequently your plan will be shared with employees).*

A number of internal vehicles are used for business continuity awareness including information provided during new hire orientation, postings on the company intranet, and training offered through Aon’s training program. Additional awareness campaigns and training are conducted for potential high-risk incidents (i.e., hurricane season, etc.).

b. *Identified essential business functions and key employees (within your organization) necessary to carry them out.*

Every Business Continuity Plan Owner is required to review mission critical activities and ensure there are no “key” person dependencies. In cases where dependencies exist, an alternate is to be identified and appropriately briefed. Confirm personnel who currently delivers mission critical activities. Identify and document named alternates who can be deployed from other locations or other less critical activities. Confirm key local suppliers and review service level agreements with respect to their arrangements for a Pandemic event and then document suitable alternates to the key suppliers.

c. *Contingency plans for:*

i. *How your organization will handle staffing issues when a portion of key employees are incapacitated due to illness.*

Aon has included a Pandemic scenario in its business continuity planning since 2007 through the Business Impact Analysis and Business Resumption Planning process. The plan takes into account colleague absenteeism from 20% to 50% and up to full site closure.

Aon has established a Corporate Health Crisis Management Task Force to monitor the threat of a pandemic or any other type of health crisis. Educating and creating awareness among colleagues about the seriousness of health crisis and precautionary measures to be taken to promote good health are fundamental to minimizing effects, should an outbreak occur. Educational materials

have been published on Aon's internal news database to be viewed by all colleagues, and regular updates occur as part of our Health Crisis Awareness and Education Program. The task force meets regularly to assess the threat, continuously review current plans, assess any gaps, and make enhancements where appropriate.

Aon has defined criteria for colleagues and vendors based on the defined levels of contamination within a location with specified triggers for actions and considerations. A copy of the Aon Health Crisis Management Plan is available upon request.

ii. *How employees in your organization will carry out the essential functions if contagion control measures prevent them from coming to the primary workplace.*

Identify and document those personnel who could deliver all or part of their role virtually.

d. *How your organization will communicate with staff and suppliers when primary communications systems are overloaded or otherwise fail, including key contacts, chain of communications (including suppliers), etc.*

Capacity planning is part of our normal business process. The capacity planning unit monitors capacity on a daily basis, creates a broad capacity plan on an annual basis, and revises the plan periodically. This plan is built using input provided by Aon's business units on growth of the business, taking into account computing growth from existing clients, clients adding new services, new application functionality, and new clients.

Our comprehensive capacity planning effort guarantees that additional capacity is installed before service levels are adversely impacted.

Disk space is carefully managed and as with processors, our planning provides more capacity based on forecasts and is installed ahead of business impact. All data files are fully locally and remotely mirrored on our EMC storage subsystems.

Data is maintained by DB2 through data sharing. Our online systems are driven through CICS. Our implementation dynamically balances incoming online and batch work across multiple z/OS images within the sysplex. By spreading work across sysplex members, we are able to sustain higher loads than a single system as well as make applications continuously available across scheduled and unscheduled system outages.

Because we have successfully implemented Parallel Sysplex, 50% and 100% growth in volumes are fairly simple to absorb by adding additional processors and starting DB2 data sharing members of the existing DB2 groups. Batch and CICS systems can be started and managed. Because we are running only multiple production machines, additional computing power can be accomplished by adding more processing elements within the existing machines or adding more systems. We have grown our environment rapidly to address our business needs. If we were to encounter an overload situation in which our systems are unable to handle, the PSERS consulting team would reach out to you directly to inform you of any situation that might be impactful.

e. *How and when your emergency plan will be tested, and if the plan will be tested by a third-party.*

Business Continuity Plans are reviewed annually. Aon recently switched our data centers to CyrusOne in 2018. Actual test results are not available yet but will be sometime around autumn of 2019.

Plans are regularly tested in accordance with the program standards. Exercises are developed and conducted based on criticality using one of Aon's acceptable methods. Action plans for identified deficiencies are developed. Documented results are either drafted by or submitted to the appropriate leader in the Business Technology Resilience (BTR) program.

The BTR program exercises various aspects of plans on varying schedules.

III-4. Mandatory Minimum Qualifications

A. The Offeror must meet all of the following minimum qualifications, and agree to meet each of the following requirements, to be given further consideration. Failure to satisfy each of the minimum qualifications, or agree to meet each of the following requirements, will result in the immediate rejection of the proposal.

- 1. As of December 31, 2018, the Offeror must have at least five (5) tax-exempt clients, of which at least three (3) are public pension plan clients having over \$10 billion in assets, for whom it provides investment consulting work at both fund- and asset-class levels. Duties related to each engagement must include asset allocation, asset/liability, and risk analysis.**

AHIC provides consulting services to 32 U.S. retainer public pension clients. Within our public pension clients, we have 15 with over \$10 billion in assets under advisement. Services include asset allocation studies, asset-liability analysis/spending policy, and risk analysis (as of June 30, 2018).

- 2. The Offeror must have been in the business of providing investment consulting services for at least five years, evidenced by a certificate of incorporation or copy of Form ADV as well as documentation of investment consulting clients (including venture capital/private equity/real estate consulting clients) which date back five years.**

AHIC has provided investment consulting services through legacy organizations since 1974.

Please refer to the **Appendix** section for AHIC's Form ADV Part 2A and 2B.

Due to confidentiality reasons, we cannot disclose documentation of investment consulting clients. However, we have provided the breakdown of our clients by plan type below (as of June 30, 2018).

Client Type	Assets Under Advisement	Number of Clients
Corporate Clients	\$598 billion	309
Public Clients	\$1,518 billion	32
Taft-Hartley and Union-related Benefit Plans	\$22 billion	8
Non-Profit	\$128 billion	118
HNW/Trust	\$1 billion	2
Insurance	\$5 billion	4
Wealth	\$7 billion	4
Total	\$2,279 billion	477

3. The Offeror must be a Registered Investment Advisor with the SEC under the Investment Advisors Act of 1940. Provide a copy of the latest Form ADV Parts I and II.

Yes, AHIC is a registered investment advisor with the SEC under the Investment Advisors Act of 1940. ADV Form Parts I and II were replaced by ADV Parts 1A and 2A and 2B. It is our policy to include Parts 2A and 2B with our proposals. Upon request, we'll be happy to provide Part 1A, which is approximately 120 pages.

Please refer to the **Appendix** section for AHIC's Form ADV Part 2A and 2B.

4. The primary consultant and principal assistant that will be assigned to the PSERS account must each have at least five years' experience analyzing, monitoring, recommending for investment, or investing in, each asset class recognized by PSERS in its Investment Policy Statement, Objectives, and Guidelines, which can be obtained at <http://www.psers.pa.gov/About/Investment/Pages/Guide.aspx>.

Claire Shaughnessy, partner, will continue to serve as the lead consultant for PSERS, with the addition of Kevin Vandolder, partner, who will co-lead as the defined contribution lead consultant. Amanda Janusz and Daren Moran, senior consultants, will be the principal assisting consultants. Claire joined the AHIC in 2010 and has over 25 years of institutional investment experience analyzing, monitoring, recommending for investment, or investing in, each asset class recognized by PSERS in its Investment Policy Statement, Objectives, and Guidelines. Kevin has more than 20 years of experience serving defined contribution plan clients and researching defined contribution issues. He joined AHIC in 1996 and has 25 years of institutional investment consulting experience. Amanda joined AHIC in 2007 and has more than 10 years of investment experience and Darren joined AHIC in 2011 and has 8 years of investment experience. Both Amanda and Darren advise clients on their investment policy, asset allocation, investment manager evaluation and selection, and performance evaluation. Given the size of the relationship, Steve Cummings, Global Head of Investment Consulting, will act as the Executive Sponsor for this relationship. Steve has over 25 years of investment consulting experience with large investors such as PSERS³.

5. The Offeror must have, or have access to, a database sufficient in size and scope to allow an analysis of the risk and returns of investment firms and each of their strategy offerings.

AHIC uses a combination of internal and external databases to support the manager research process. eVestment Alliance serves as our primary screening tool for managers and strategies across the publicly traded asset class space. We conducted a thorough build vs. buy analysis to determine the best initial screening tool for managers and strategies and find eVestment to be a standard across the industry for this purpose. Additionally, data integrity and timeliness of data updates make it a compelling tool to conduct initial screening on managers and strategies.

Investment managers do not pay any fees to upload information on eVestment, making it accessible to all managers, regardless of size. eVestment currently has over 8,000 products across the broad asset classes and we continuously encourage the broad manager community to update information on their strategies into eVestment.

While we use an external database for our initial manager screening, we also maintain a proprietary internal database that serves as a repository for our research notes, ratings, quantitative analysis, etc. In early 2015, AHIC released a new investment manager research platform that brings exciting and high-tech features to our research professionals and consultants. This system allows us to more efficiently

³All data provided as of December 31, 2018.

manage the information we gather and assess across a wide universe of investment products. We utilized an external technology vendor's platform and customized it to our needs.

Our database, InView, is built upon state of the art technology, which allows for easy access, storage, and retrieval of information on nearly 10,239 investment managers and over 23,000 products (as of September 30, 2018). The latest search and navigation tools are built into InView, and the home page is customizable, bringing the information most relevant to researchers to the front and center. Additionally, the database maintains a complete history of our ratings, analysis, and research based on our coverage of these strategies over time. We do not sell our database to third parties.

- 6. *The Offeror's primary consultant must not have provided general consulting services to either the Commonwealth of Pennsylvania, State Employees' Retirement System, or the Commonwealth of Pennsylvania, Pennsylvania Municipal Retirement System during the past three years.***

Claire Shaughnessy and Kevin Vandolder have not provided consulting services to the Commonwealth of Pennsylvania, State Employees' Retirement System, or the Commonwealth of Pennsylvania, Pennsylvania Municipal Retirement System during the past three years.

- 7. *The Offeror will be required to reimburse PSERS for, or pay directly on PSERS' behalf, the reasonable travel expenses actually incurred by PSERS, if any, (i) for members of PSERS' professional investment staff to travel to Offeror's location for due diligence and/or to discuss performance results, economic outlook, investment strategy, organization changes and other pertinent matters; (ii) to attend investment conferences, training, seminars or similar events sponsored by Offeror (or any affiliate of Offeror relating to the services provided under this Agreement); and (iii) to attend meetings and interviews at existing or prospective investment manager sites. Reimbursable or directly payable expenses will include airfare, automobile rental, lodging, meals, Offeror-sponsored event registration fees, and other travel-related expenses at maximum allowance rates established by the Commonwealth Management Directive 230.10 as revised, Travel and Subsistence Allowances. The reimbursable or directly payable expenses for each of (i), (ii), and (iii), above, will not exceed \$25,000 per calendar year.***

AHIC confirms that we will provide reimbursement for these expenses up to the requested limit.

- 8. *Offeror will be required to perform services under this agreement subject to the exercise of that degree of judgment and care under the circumstances then prevailing which persons of prudence, discretion, and intelligence who are expert in such matters, exercise in the management of like matters, not in regard to speculation but in regard to the permanent disposition of the Fund, considering the probable income to be derived therefrom as well as the probable safety of the invested capital. Offeror will be required to acknowledge, with respect to PSERS and the Fund and/or Trust, that, without qualification, it is a "fiduciary" as that term is defined in the Employee Retirement Income Security Act of 1974 (ERISA), regardless of the applicability of ERISA to this agreement.***

AHIC acknowledges that in performing its services, it is a fiduciary to the extent of its investment advice and will act in accordance with the standards of care applicable to fiduciaries under Title I of the Employee Retirement Income Security Act of 1974, as amended (ERISA).

- 9. Offeror will be required to include in its consulting services staff professionals dedicated to, and expert in, investment risk, fiduciary, and investment governance topics.**

AHIC has specialists experienced in investment risk, fiduciary, and governance services. Jeanna Cullins and her team have been supporting and will continue to provide support to PSERS.

- 10. Offeror must provide and maintain a secure, client-facing, web-based platform that is frequently updated and continuously available to PSERS that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools.**

Aon's client portal provides clients such as PSERS with direct access to Aon's complete investment manager research including manager ratings, operational due diligence reviews and reports, meeting notes, and thought leadership. New features are continuously being developed and tested with users. The information within the platform is interactive is automatically updated with the most recent data available. Aon is continuing to enhance our client portal and has partnered with Pivotal Labs to upgrade our entire global technology platform. PSERS currently has access to Aon's client portal which provides access to Aon's investment and operational due diligence reports and notes.

- B. The Offeror's consulting team must provide written responses to each of the aforementioned mandatory qualifications and requirements substantiating how your firm satisfies each qualification and confirming that your firm will satisfy each requirement. The responses must contain sufficient information as prescribed to assure the Board of its accuracy. Failure to provide complete information will result in the rejection of the proposal.**

Confirmed. Please see our responses provided above for each mandatory qualification.

III-5. Offeror's Qualifications

- A. Please provide the following information about your firm:**

- 1. Provide a summary description of your firm including the name, year formed, history, ownership structure, names of owners or partners, subsidiary or affiliate relationships, and the reporting and control structure. If you are an affiliate or subsidiary of another company, what percentage of the firm's total revenue does your division generate? Please describe the organizational structure and your relationship to the parent company and any other subsidiaries. List services to the investment community (trading, investment management, database) other than investment consulting services, provided by your firm, as well as services of any parent, subsidiary, or affiliate. If investment consulting is not your only line of business, please make clear in answering these questions the history and circumstances of your entrance into investment consulting.**

Aon Hewitt Investment Consulting (AHIC) is the U.S. investment consulting division of Aon, with headquarters in Chicago, IL. AHIC is a direct subsidiary of Aon Consulting Inc. and an indirect wholly owned subsidiary of Aon plc (NYSE: Aon), which is a publicly traded company. The firm combines the extensive resources of Hewitt Investment Group, EnnisKnupp, and Aon Investment Consulting into one powerful investment consulting firm.

Hewitt Investment Group began providing institutional investment consulting services in 1974; EnnisKnupp was founded in 1981 by Richard Ennis and Jim Knupp; and Aon Investment Consulting commenced business in 1986.

AHIC came together in its current form in 2010 when Hewitt Associates acquired Ennis Knupp & Associates and subsequently merged with Aon Corporation.

Additional information can be found in the Aon Proxy Statement, located on the Investor Relations Page on www.aon.com.

Shareholders

As of April 18, 2018, the beneficial owners of 5% or more of Aon's Class A Ordinary Shares entitled to vote at the Annual Meeting and known to the Company were:

Name and Address of Beneficial Owner	Number of Class A Ordinary Shares	Percent of Class (1)
The Vanguard Group 100 Vanguard Blvd. Malvern, PA 19355	17,583,612(2)	7.18%
Massachusetts Financial Services Corporation 111 Huntington Avenue Boston, MA 02199	17,426,936(3)	7.12%
BlackRock, Inc. 55 East 52nd Street New York, NY 10055	15,339,874(4)	6.26%

(1) As of April 18, 2018, we had 244,875,319 Class A Ordinary Shares outstanding.

(2) Based upon information contained in a Schedule 13G/A filed with the SEC on February 8, 2018 pursuant to Rule 13d-1(b) of the Exchange. The Vanguard Group is a registered investment advisor and has: (a) sole voting power as to 360,440 Class A Ordinary Shares; (b) shared voting power as to 59,038 Class A Ordinary Shares; (c) sole dispositive power as to 17,172,448 Class A Ordinary Shares; and (d) shared dispositive power as to 411,164 Class A Ordinary Shares.

(3) Based upon information contained in a Schedule 13G filed with the SEC on February 9, 2018 pursuant to Rule 13d-1(b) of the Exchange Act. Massachusetts Financial Services Company is a parent holding company and has: (a) sole voting power as to 16,252,921 Class A Ordinary Shares; (b) shared voting power as to no Class A Ordinary Shares; (c) sole dispositive power as to 17,426,936 Class A Ordinary Shares; and (d) shared dispositive power as to no Class A Ordinary Shares.

(4) Based upon information contained in a Schedule 13G/A filed with the SEC on January 30, 2018 pursuant to Rule 13d-1(b) of the Exchange Act. BlackRock, Inc. is a parent holding company and has: (a) sole voting power as to 13,150,523 Class A Ordinary Shares; (b) shared voting power as to no Class A Ordinary Shares; (c) sole dispositive power as to 15,339,874 Class A Ordinary Shares; and (d) shared dispositive power as to no Class A Ordinary Shares.

Aon Overview

There are three general business components of Aon—Aon Hewitt, Aon Risk Solutions, and Aon Securities.

- **The Townsend Group ("Townsend"):** On December 29, 2017, Aon announced it had completed its acquisition of The Townsend Group (Townsend), majority owned by Colony NorthStar, Inc. Townsend is a provider of global investment management and advisory services primarily focused on real estate and real assets.

Aon Securities LLC (“ASL”): ASL is a FINRA registered broker-dealer and an SEC registered investment adviser, and an indirect subsidiary of our ultimate parent, Aon plc. Interests in the Aon Hewitt Group Trust (AHGT), Liquid Alternatives Fund (LAF), Opportunistic Alternatives Fund (OAF), Aon Private Credit Fund (APCF), and Aon Hewitt Institutional Funds, (AHIF) are also offered through ASL, which is not remunerated for this service. ASL often plays several roles when engaging with its clients, including structuring and distribution of securities. On the structuring side, ASL advises on the details of a proposed transaction, including the duration, pricing, and terms and conditions of securities. Once structured, ASL also sells or distributes the securities to a wide variety of investors (i.e., acts as a placement agent). As part of ASL’s sale or distribution of securities, ASL may come into contact with AHIC clients as potential investors in securities being distributed by ASL. Only properly FINRA licensed registered representatives can directly engage in the sales or distributions of AH funds offered by ASL acting as placement agent. AHIC does not receive any commission for any sales of ASL distributed securities. AHIC’s compensation is derived from asset-based advisory fees based on the AUM of the client’s portfolio for its discretionary services regardless of the use of AH private funds or unaffiliated products/services. AHIC’s advisory fees are the direct compensation paid by the client to AHIC as disclosed under the terms of a discretionary investment management agreement.

- **Aon Retirement Plan Advisors, LLC (“ARPA”)** is a registered investment adviser, and like us, is a wholly owned subsidiary of Aon Consulting, Inc. ARPA provides investment consulting services primarily to smaller retirement plans (typically under \$75 million in plan assets) and to companies providing certain executive benefits to their employees.
- **Aon Trust Company LLC (“ATC”)** is an Illinois non-depository, state-chartered bank. AHIC serves as investment adviser with limited discretionary authority to the Aon Hewitt Collective Investment Trust (AHCIT), of which ATC is Trustee. AHIC offers the AHCIT to certain clients. Additional information on the AHCIT, including its structure, risk factors, conflicts of interest, tax-related information, fees and expenses – including the fees paid to AHIC - and other important information are available within the AHCIT private offering statement. **Aon Hewitt Limited (“AHL”)** is a UK registered company that has been regulated by the UK’s Financial Conduct Authority to provide regulated products and services since September 2011. AHL’s main focus is on advising UK pension schemes, Trustees, and scheme sponsors on managing pension risks, setting investment strategies, improving member engagement, and providing member administration services. In addition, AHL provides HR and outsourcing services to clients.
- **Aon Hewitt, Inc.** is a wholly owned subsidiary of Aon Canada and part of the Aon plc group of companies. Aon Hewitt, Inc. offers a range of sophisticated advisory and consulting services in risk control and risk management, reinsurance, and human capital. The Canada Retirement & Investment Consulting organization consists of retirement consultants and actuaries who advise and support organizations in actively managing the risks of their retirement benefit programs.

For a listing of all our subsidiaries, please refer to our Annual Report that can be found on our website at: <http://ir.aon.com>.

AHIC Experience

AHIC has been providing investment consulting services to foundations, endowments, defined benefit and defined contribution retirement plans and operating funds for over 40 years. Following are a list of services we are able to provide to our clients:

- Development of Investment Policy
- Investment Manager Monitoring and Due Diligence
- Recommendations and Implementation of Investment Structures
- Custodian Selection and Oversight

- Mission Related Investment Strategy Research and Recommendations
- Investment Program Evaluation
- Performance Calculation
- Transition Management Oversight
- Investment Manager Selection
- Asset Allocation Analysis
- Asset/Liability Studies
- Portfolio Risk Analysis
- Private Equity Advisory Services
- Real Estate Advisory Services
- Delegated Services
- Board/Committee Governance Strategic Planning
- Investment Education
- Fiduciary Reviews
- Governance Diagnostics
- Fiduciary and Governance Training
- Policy development and review
- Strategic Planning
- Board Self-Assessments
- Executive Director and CIO evaluations
- Opportunistic Strategies Advisory Services

All of AHIC's revenue comes from consulting services which include advice on investment policy, investment portfolio structure, manager research and selection, cost and transition management, discretionary services, master trustee/custodian selection and oversight, board/committee governance, fiduciary audits and operational reviews, strategic planning, fiduciary education, private equity, real estate, and liquid alternatives.

2. Do senior executives have ownership interests in the firm? If so, how much?

Senior employees are eligible for annual incentives paid in restricted Stock Units (RSUs). Additionally, employees may participate in the firm's employee stock purchase plan (ESPP) in which participating employees can purchase company shares at a discounted price.

3. State the name, title, address and telephone number of the proposal contact person. Will the primary consultant assigned to PSERS account have ownership interest in the firm or is there a specific arrangement for sharing in the profits earned by the enterprise (e.g., salary, bonus, group/individual performance incentives, profit sharing, etc.)? Please describe.

The primary contact for the overall PSERS relationship is:

Claire Shaughnessy, CFA
 Partner
 Merritt 7 Corporate Park, Building 201
 Norwalk, CT 06851
 +1.203.523.8163 | claire.shaughnessy@aon.com

Consultants are compensated through a combination of base salary commensurate with industry standards and bonuses based on individual contributions, as well as success of the group and firm as a whole. Incentive compensation for partner level employees is significantly impacted by the success of the investment consulting practice. The success of our business is driven by providing high quality service to our clients and creating long term relationships. We do not assign a specific percentage of compensation based on client retention/satisfaction. However, consultants who experience recurring service issues with clients may have their annual incentives reduced or eliminated. In addition, a consultant's future employment is predicated in large part on his or her ability to serve clients well.

Our efforts to attract and retain high quality professionals include regular review of our compensation policies to ensure our compensation structure appropriately rewards for work effort, productivity, quality of

work, and client retention. In addition, nonmonetary benefits are provided, including work environment free from conflicts of interest, ability to pursue education (e.g., graduate degree, CFA designation, relevant coursework), ability to perform a variety of functions, and access to leading edge industry information and technology.

We are unable to discuss specific details of any individual retention plans; however, we have both annual incentive compensation and longer-term incentive plans in place to ensure retention of our senior talent. A portion of our annual incentives (35% for incentives >\$100,000 and 20% for incentives >\$50,000 and <= \$100,000) are paid in Restricted Stock Units (RSUs) that vest over three years (1/3 per year). Executives are eligible for long term incentives annually and these awards are typically RSUs that vest over 5 years (20% per year).

B. Please provide the following financial information:

1. Audited financial statements for the past three (3) years.

Out of respect for our environment, Aon does not provide printed 10-Ks, annual reports, or financials in our proposal responses. Below is a link to Aon's Annual Report on Form 10-K for the year ended December 31, 2018, as well as preceding years starting from 2006. The website contains revenue information by business segment: <http://ir.aon.com>.

2. Any special audit reports concerning internal controls for the past three (3) years.

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

C. Within the past five years, have there been any significant developments (e.g., changes in ownership, personnel reorganization, new business ventures) in your firm? If so, describe these developments in detail.

On December 29, 2017, Aon announced it had completed its acquisition of The Townsend Group (Townsend), majority owned by Colony NorthStar, Inc. Townsend is a provider of global investment management and advisory services primarily focused on real estate and real assets. On May 1, 2017, Aon completed a definitive agreement with Blackstone to sell its Benefits Administration, HR Business Process Outsourcing and related Consumer Experience businesses, subject to customary closing conditions. As of

January 1, 2015, the U.S. investment consulting group rebranded its name to Aon Hewitt Investment Consulting, Inc. from Hewitt EnnisKnupp, Inc.

D. Do you anticipate any significant changes in your firm? If so, describe these anticipated changes and their impact on clients.

We do not anticipate any near-term changes in our ownership structure. With Aon announcing the acquisition of The Townsend Group (Townsend) on December 29, 2017, we do anticipate some modest internal reorganization as the Townsend colleagues come onboard.

E. Have any senior executives left the firm in the past five years? Please describe the circumstances of their departure(s).

In the past five years, AHIC has had two senior partners depart the firm. Due to employee confidentiality reasons, we are unable to provide employee specific departure information. Reasons for leaving include retirement as well as other reasons, which we cannot share due to employee confidentiality.

F. Explain your firm's goals for expansion and accepting new client business. How will the firm control the quality of service to clients? Include the following:

1. Total number of accounts that will be accepted.

We do not have any maximum growth targets. Instead, we strive for growth at a measured pace. We are selective about pursuing growth opportunities, as our first priority is to consistently provide the highest quality service to our clients. We treat our client relationships as partnerships, valuing the quality of each more than the overall quantity.

2. Total assets that will be accepted.

We do not set specific limits on the number of clients that AHIC will accept, but we seek to assure that we will not take on more clients than we can responsibly handle.

3. Plans for additions to professional staff and approximate timing in relation to growth of accounts and/or assets.

In recent periods, we have used our position of financial strength to continue adding resources to our research and consulting areas. Our growth of professional staffing correlates to our growth as a business. Our focus is to maintain personalized service without sacrificing our relationships with existing clients for the sake of acquiring new clients by consistently reviewing consultant's capacity based on the complexity and number of his/her client relationships.

G. What is the location of firm headquarters and any branch offices? If several locations, what quality controls does the firm use to ensure consistency of services among clients, and how does the firm handle research, information processing and databases?

As-of September 30, 2018, AHIC has 27 offices with 339 colleagues. As of the same date, AHIC has 19 virtual colleagues.

Office Location	Colleagues
Atlanta, GA	53
Bloomington, MN	2
Boston, MA	1

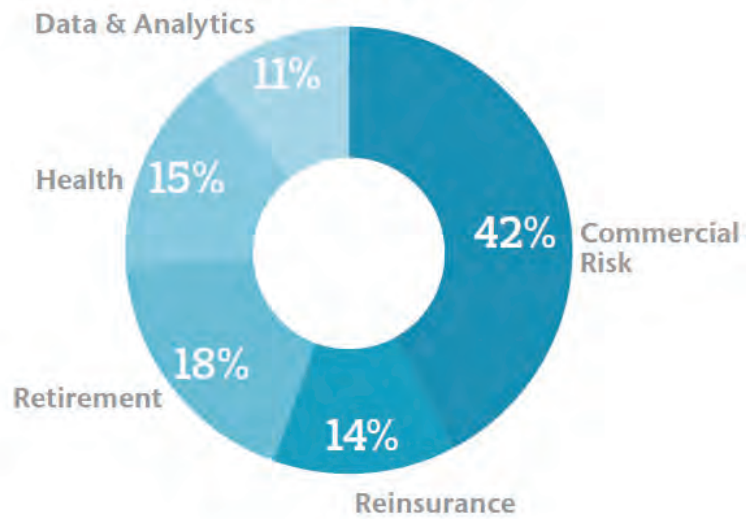
Office Location	Colleagues
Charlotte, NC	1
Chicago, IL	179
Clayton, MO	3
Dallas, TX	1
Denver, CO	4
Garden City, NY	1
Irvine, CA	1
Jacksonville, FL	1
Lincolnshire, IL	20
Los Angeles, CA	1
New York, NY	9
Norwalk, CT	29
Radnor, PA	5
Raleigh, NC	3
Richmond, VA	4
San Francisco, CA	2
Seattle, WA	4
Somerset, NJ	4
Southfield, MI	1
Tampa, FL	4
The Woodlands, TX	1
Waltham, MA	3
Washington, DC	1
Winston-Salem, NC	1

- H. List your firm's lines of business and approximate contributions of each business to your firm's total revenue. If you are an affiliate or subsidiary of another company, what percentage of the firm's total revenue does your division generate? Please describe the organizational structure and your relationship to the parent company and any other subsidiaries.**

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement, and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

In our fiscal year 2017 (January 1, 2017 through December 31, 2017), Aon reported total revenues of \$10.0 billion. Aon operates under a single P/L with five revenue streams. These include: Commercial Risk Solutions, Reinsurance Solutions, Retirement Solutions, Health Solutions, and Data & Analytic Services. We provide the 2017 revenue breakdown by line below. Please note, we do not publicly disclose revenues for individual services within our lines of business.

2017 Total Revenue by Line¹

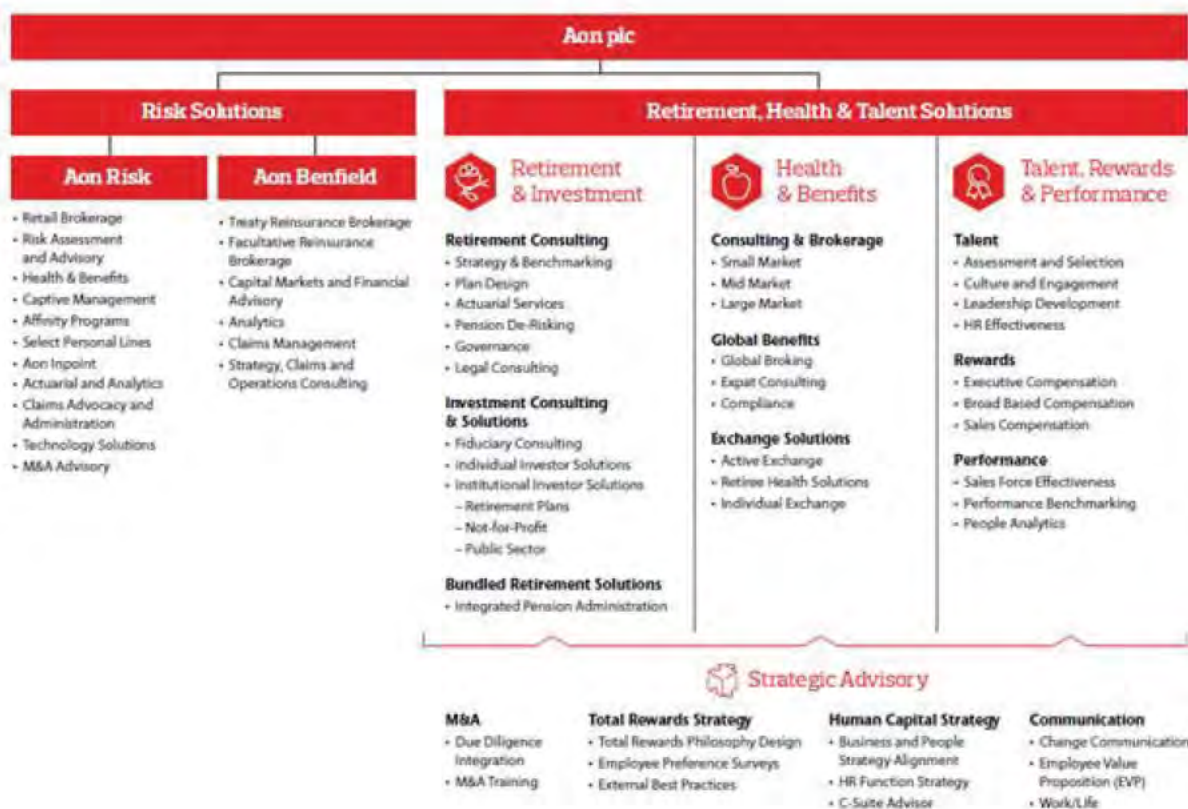


¹ Represents revenue from continuing operations.

Additional information on our company's financial results can be found on our website at: <http://ir.aon.com>.

All of AHIC's revenue comes from consulting services which include advice on investment policy, investment portfolio structure, manager research and selection, cost and transition management, discretionary services, master trustee/custodian selection and oversight, board/committee governance, fiduciary audits and operational reviews, strategic planning, fiduciary education, private equity, real estate, and liquid alternatives.

The organizational structure of our parent company is set forth below, as of January 1, 2019:



Investment advisory services provided by Aon Hewitt Investment Consulting, Inc.; additional services provided by Aon affiliated entities.

- I. Over the past five years, has your organization or any officer or principal been involved in any litigation or other legal proceedings relating to your investment or consulting activities? If so, provide a brief explanation and indicate the current status.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- J. Has your firm or any officer, director, partner, principal or employee ever been the subject of any non-routine investigation or inquiry by a governmental agency or self-regulatory body regarding fiduciary responsibilities or other investment-related matters? If so, describe each instance and summarize any directives or letters of opinion that were issued.**

[REDACTED]

- K. Please provide a copy of the most recent review by a government agency or regulatory body of your firm that relates to the services sought by PSERS.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- L. Please describe the levels of coverage for errors and omissions insurance and any fiduciary or professional liability insurance your firm carries. Is the coverage on a per client basis, or is the dollar figure applied to the firm as a whole? List the insurance carriers. Has your firm ever submitted a claim to your errors and omissions, liability, fiduciary or fidelity bond carrier(s)? If so, describe each instance.

AHIC is insured as a subsidiary under Aon's Professional Liability insurance policy, inclusive of E&O coverage, which applies to Aon and its subsidiaries on a per claim, worldwide basis, where legally permissible. ***This policy includes coverage for client claims made against AHIC for services it provides in a fiduciary capacity to its clients.***

Insurance Coverage Type	Primary Carrier	AM Best Rating as of 01/02/2019	Amount of Coverage
Professional Liability (Includes E&O, Cyber Liability)	Illinois National Insurance Co.	A XV	Up to \$5 million per claim and in the aggregate.

Clients sometimes inquire about **Fiduciary insurance** under the mistaken impression that this policy would respond to claims that the clients might bring. Aon's professional liability (E&O) coverage is the insurance maintained by Aon that is relevant to potential client claims. Aon's fiduciary liability protects Aon from claims that could be brought by participants in Aon's own employee benefit plans. The Fiduciary policy has professional services exclusion, meaning that it does not cover liability arising from the services that Aon provides to clients. To avoid creating confusion with the client about which insurance would be relevant to claims arising from service errors, Aon does not provide detail on its fiduciary insurance, but instead identifies its professional liability insurance coverage as the relevant coverage.

AHIC is part of a greater Aon organization that serves as one of the world's largest Professional Services firms; as a result, from time to time Aon is subject to claims, which may include errors and omissions claims. In the context of Aon's size, the rate of claim is low. Additional information on claims against Aon is included in the Commitments and Contingencies footnote of Aon's 10Q filings with the SEC. Aon's latest 10Q filing is available under the "filings" section at: <http://www.sec.gov>.

M. Present the previous experience and expertise of the firm providing the services proposed for PSERS.

- 1. List the names of pension funds your firm has as clients, indicating whether your firm represents these clients on a discretionary or non-discretionary basis.**

We have worked with public funds for over 30 years and currently serve 32 retainer public fund clients with approximately \$1,518 billion in assets under advisement (as of June 30, 2018), including the plans listed below⁴. (Please note, the clients who have elected to remain confidential has been excluded from the list):

Anne Arundel County Public Schools	Ohio Public Employees Retirement System
Arkansas Teacher Retirement System	PARISH OF JEFFERSON
Colorado Public Employees' Retirement Association	Pennsylvania Public School Employees' Retirement System
Commonwealth of Massachusetts	San Diego City Employees' Retirement System
Commonwealth of Puerto Rico	San Diego County Employees Retirement Association
District of Columbia Water & Sewer Authority	Sonoma County Employees' Retirement Association
Employees Retirement System of Texas	State Board of Administration of Florida
Fairfax County Public Schools	Teacher Retirement System of Texas
FDIC	Teachers' Retirement System of Louisiana
Kentucky Teachers' Retirement System	Tennessee Valley Authority
Michigan Department of Treasury	The Housing Authority of the City of Atlanta, Georgia
Minnesota State Board of Investments	Virginia Retirement System
Nebraska Investment Council	Washington Education Association Inc
New Jersey Division of Investment	Washington Metropolitan Area Transit Authority
New York State Teachers' Retirement System	

- 3. List your five largest public pension plan clients by assets. For each of these pension fund clients, please provide asset value of client by asset class, year client retained your firm, average five year asset mix of client, percent of funds for which you provided consulting services, and the five year annualized total return of the client funds' investment portfolio as of June 30, 2018.**

Client Name ⁴	Assets Under Advisement	Year Client Retained the Firm	Average 5 Yr Asset Mix (EQ/FI/Alt) ¹	% of Funds	5 Yr Annualized Net Total Return
Confidential	\$553,000,000,000	2005	N/A (DC Plan)	100%	N/A (DC Plan)
State Board of Administration of Florida	\$188,000,000,000	1996	62/21/17	100%	9.6%
Teacher Retirement System of Texas	\$151,000,000,000	2002	57/15/28	100%	8.1%
New York State Teachers' Retirement System	\$118,000,000,000	2010	61/27/12	100%	10.5%

⁴ Representative Client list as of most recent quarter-end. Inclusion in this list does not represent a recommendation or endorsement of Firm's products and/or services, nor are they exclusively representative of the product(s) discussed herein. Clients included in this list are the institutional clients which have provided written consent to Firm to be named in marketing materials. It is not known whether all clients listed above approve or disapprove of AHIC or the advisory services provided.

Client Name ⁴	Assets Under Advisement	Year Client Retained the Firm	Average 5 Yr Asset Mix (EQ/FI/Alt) ¹	% of Funds	5 Yr Annualized Net Total Return
New Jersey Division of Investment	\$79,000,000,000	2013	59/21/18	100%	8.7%

Please note: Data as of June 30, 2018

¹ Equity includes public and private equity; Fixed Income includes public fixed income and cash; Alternatives includes Private Real Estate, Hedge Funds, Real Assets and Risk Parity

Please note: It is not known whether clients listed approve or disapproved of AHIC or the advisory services provided. Returns shown are net of all fees. Return calculations include the reinvestment of dividends. Past performance is not a guarantee of future results.

3. Please complete the following for current clients:

Asset Value of Pension Fund Client	No. of Pension Fund Clients	Average Years Clients Retained the Firm
Less than \$1 billion	179	10
\$1 billion – less than \$10 billion	57	11
\$10 billion – less than \$30 billion	10	14
More than \$30 billion	9	9

Please note: Data as of June 30, 2018

4. Does your firm operate any funds or other pooled investment vehicles, including, but not limited to, funds of funds? Please identify each.

Yes. AHIC serves as the investment manager to the Aon Hewitt sponsored pooled vehicles. Additionally, AHIC has investment advisory affiliates that have related parties that sponsor and/or serve as the investment adviser to pooled vehicles.

AHIC's Delegated Investment Solutions practice has been providing outsourced investment solutions since 2009. As defined by ERISA 3(38), we serve as a discretionary investment manager for our delegated/OCIO clients, and as such we take discretion, authority, and control of assets.

Additionally, on December 29, 2017, Aon finalized its acquisition of The Townsend Group, a registered investment adviser and a provider of global investment management and advisory services, with a focus on investments in real estate and real assets.

5. Please list the names of pension plan clients that you have added in the last three years, and the assets of each. Specify if DB, DC, or both.

The firm has gained over 101 retainer clients over the past three years (as of June 30, 2018). Below we list the public fund clients the firm has gained over the past three years. Please feel free to notify us for contacts of additional accounts outside of public funds listed below.

As a courtesy to our clients, please contact us prior to getting in touch with our references.

Public Fund Clients—Gained	Assets ¹
Confidential	\$1,000,000,000
Parish of Jefferson	\$44,000,000
San Diego County Employees Retirement Association	\$12,000,000,000

Public Fund Clients—Gained	Assets ¹
Minnesota State Board of Investments	\$70,000,000,000
¹ Data as of June 30, 2018. It is not known whether clients listed approve or disapprove of AHIC or the advisory services provided.	

6. Please provide the names of all pension plan clients that you have lost in the last three years, the asset size of each, and why they were lost. Specify if DB, DC, or both.

Below is a list of public fund clients the firm has lost in the past three years (July 1, 2015 through June 30, 2018).

Public Fund Clients—Lost	Assets ¹
Township of Abington	\$214,820,000
Jackson Health Systems (Public Health Trust)	\$555,346,318
Virginia Port Authority	\$6,880,000
Montgomery County Public Schools Employees' Retirement and Pension System	\$1,445,258,884
Texas Municipal Retirement System ²	\$0
Milwaukee County Deferred Compensation Plan	\$317,872,753
Employees' Retirement System of Kansas City, Missouri	\$1,081,909,523
South Carolina Retirement System	\$30,102,107,036
Florida Department of Financial Services	\$17,000,000,000
North Carolina Dept of State Treasurer ²	\$0

¹Data as of June 30, 2018.

²AHIC did not advise on the assets of this client. AHIC provided Fiduciary Services.

It is not known whether the listed clients approve or disapprove of AHIC or the investment advisory services provided.

Due to client confidentiality reasons we do not disclose client contact information for those who have left. The majority of our lost clients has been the result of mergers/acquisitions or plan terminations. Other reasons include:

- Budgetary considerations
- Client bankruptcy
- Plan oversight changed to internal management
- Another consultant selected in re-bid process
- Differing views on plan matters
- Client outsourced services

7. Does your firm have any record or rating system that depicts value it has added over either a random fund selection process or an intelligent indexing approach? If so, please provide and explain.

Please refer to our Manager Buy-Rated Record in the **Appendix** section.

8. How does your firm evaluate the quality of its consulting services?

Our quality assurance process consists of quality control oversight that works in tandem with compliance regulation.

AHIC has established Investment Practice Interest Groups for Defined Benefit, Defined Contribution and Public Funds. These Interest Groups are led by our Practice Leaders and are comprised of investment consultants with client exposure. Kevin Vandolder as DC Practice Leader heads up the Defined Contribution Interest Group. Kristen Doyle and Mike Comstock co-lead the Public Funds Interest Group. These Interest Group meets quarterly to review a variety of topics of interest and provides a forum for sharing AHIC's best thinking with our consultants regarding investment topics. In addition, AHIC has formalized our best thinking for each practice in a written "Playbook" which is approved by the U.S. Investment Committee. Lastly, our US Client Advisory Investment Consultant practice regularly reviews our client investment programs to ensure consistency of client portfolios with AHIC's current best practices.

Quality control will be handled by all members of the team but primarily will be the responsibility of Claire Shaughnessy and Kevin Vandolder, PSERS' lead consultants, to ensure all reporting, including performance/risk, is provided to Northern Trust with the highest quality of information.

In terms of performance reporting, to help ensure the accuracy of the data we receive from custodians, we follow our standard reconciliation procedures. On a monthly basis, we use data obtained from both clients' custodians and investment managers for performance measurement. Our first step is to independently calculate monthly returns using custodian data and cross check with returns calculated and provided by each investment manager. This allows us to verify the accuracy of the market values and transactions provided by the custodian. Should any discrepancies surface, our next step is to cross check both market values and cash flows between custodian and investment manager statements.

In addition to the above reconciliation, we apply our own review of the reasonableness of the returns by individual account and in aggregate at the asset class and total fund levels. When we find errors or unusual results, we work with the custodian and/or the managers to resolve any anomalies. When meaningful discrepancies persist, we notify the client and seek to resolve any issues.

All our deliverables are reviewed by at least one person (other than the preparer). Further, to ensure quality across our firm, we have a centralized research platform, meaning that our clients do not receive conflicting advice in terms of market views and areas of opportunity.

Lastly, Lyda Iturralde serves as the Chief Compliance Officer for Aon Hewitt Investment Consulting, Inc., as described in the firm's Form ADV that accompanies this response. She joined the firm in July 2015. Lyda oversees a team of compliance professionals dedicated to AHIC. AHIC's CCO reports directly to Aon's Global Chief Compliance Officer, who is aligned directly with Aon's Global Compliance Department, consisting of attorneys and compliance professionals, located throughout the world aligned regionally and by line of business.

N. Describe your research and analysis capabilities, noting supporting human expertise and technology.

AHIC has several teams that the proposed lead consultants will leverage for PSERS. This includes our Investment Policy Services team, Global Asset Allocation team, Global Investment Management team, Trust Services team, Transition Management Team, and our Fiduciary Services team. These teams focus on advancing our knowledge and thought leadership in their respective areas.

- **Global Investment Policy Services (IPS):** AHIC's IPS team (consisting of 14 employees as of September 30, 2018) is focused on risk management and policy development. The team is responsible for managing risk in general, such as: performing asset-liability analyses, asset allocation studies, investment structure reviews, benchmark reviews, and spending analyses. The team also provides top-down, strategic investment advice and researches new investment strategies. The IPS team is active in developing webinars, blog pieces and white papers on investment recommendations made to our client base. The research is original and may come from a brain-storming group—such as the Idea Development Forum—or from client questions and projects that are brought to IPS's attention. Content comes from across the firm, and the most experienced thought leaders are involved with writing and presenting pieces.
- **Global Asset Allocation Team (GAA):** A global team of economists and allocation specialists (consisting of 8 employees, as of September 30, 2018) who discuss asset class trends and develop our firm's medium-term views based upon their analysis. The GAA has been in existence for over 10 years as of September 30, 2018.
- **Aon Center for Innovation and Analytics (IC):** Investment team (consisting of 8 employees, as of September 30, 2018) focused on global high impact solutions often involving the creation of proprietary models and extensive use of data & analytics to solve business challenges. This team was created in 2014.
- **Global Investment Management** Each group in global investment management has asset class-based resources and databases, as well as team specialists that help to properly evaluate managers that our firm recommends. We have been providing clients with manager research resources since our inception in 1974. Investment Management team, consisting of more than 150 full-time global research professionals⁵ covering traditional, emerging, and alternative strategies, including operational due diligence (as of September 30, 2018), is dedicated to researching and evaluating investment managers worldwide.
- **Fiduciary Services:** A team (consisting of 3 employees, as of September 30, 2018) with specialists who are aware of trends and legislative changes that make best practices available. The Fiduciary Services team began in 2005.
- **Trust Services Team:** Our dedicated Trust Services team (consisting of 4 employees, as of September 30, 2018) focuses on securities lending and custody banks, along with other related research topics. This team provides insight on best practices in the industry, and a broad knowledge of common institutional peer practices.
- **Transition Management:** AHIC Transition Management team (consisting of 4 employees, as of September 30, 2018) has experience assisting clients with transition events that have involved multiple asset classes and required expertise in complex issues such as derivative usage, foreign exchange transactions, and tax issues in international markets. Our team has knowledge and coverage of qualified transition managers to assist many clients in identifying a transition manager for a particular event or creating a bench of transition managers that are available when an event occurs.

⁵ Total combined research staff as of 9/30/2018 includes 49 GIC Manager Research Staff (AHIC and Aon affiliates manager research colleagues), 21 operational due diligence colleagues (offshore + onshore), 72 Townsend colleagues from advisory, portfolio management and strategy teams (includes all Legacy Aon RE staff, plus 2 Legacy PE Staff), and 12 Legacy PE staff. Offshore, Innovation, and Support staff represent additional colleagues. Some team members have cross team responsibilities or reporting lines outside the manager research function, includes AHIC and its global Aon affiliates.

Following is an organizational chart of the Global Investment Manager Research team, as of September 30, 2018²:

Global Investment Manager Research - Our Dedicated Team

More than 150¹ dedicated research professionals covering traditional, emerging, and alternative strategies, including operational due diligence



¹ Total combined manager research staff as of 30 September 2018, includes AHIC and Aon affiliates manager research colleagues, including Townsend advisory, portfolio management, and strategy teams and operational due diligence colleagues. Offshore, Innovation, and Support staff represent over 37 additional colleagues. Some team members have cross team responsibilities or reporting lines outside the manager research function.

² Aon's real estate and private equity teams align from a collaboration and leadership perspective under The Townsend Group. Legacy AHIC colleagues that report to The Townsend Group maintain a supervisory relationship to AHIC through Aon's global CIO as they are part of AHIC's registered investment advisor.

Investment advice and consulting services provided by Aon Hewitt Investment Consulting, Inc., an Aon Company

² Total combined research staff as of 9/30/2018 includes 49 GIC Manager Research Staff (AHIC and Aon affiliates manager research colleagues), 21 operational due diligence colleagues (offshore + onshore), 72 Townsend colleagues from advisory, portfolio management and strategy teams (includes all Legacy Aon RE staff, plus 2 Legacy PE Staff), and 12 Legacy PE staff. Offshore, Innovation, and Support staff represent additional colleagues. Some team members have cross team responsibilities or reporting lines outside the manager research function, includes AHIC and its global Aon affiliates.

- 1. Are your resources internal or external? If any external resources are used, provide a description including the name of vendors providing these resources. How is the information used to inform and advise clients? List investment research reports or studies that you have provided clients in the past 12 months. Describe your capability to carry out special projects requested by PSERS. Provide sample reports that best represent your research capabilities.**

While 100% of our research is conducted internally, we combine our original research with exhaustive reviews of both professional and academic bodies of literature. We use externally provided data in our analysis. To bolster our internal research efforts, we maintain relationships with prominent academics in the field of finance. We frequently rely on these contacts to review our work, and these researchers often share with us early drafts of their work. These efforts help to ensure that our advice to clients is supported by both sound finance theory and strong empirical evidence. We also participate in a number of industry seminars such as those sponsored by CFA Institute.

AHIC continuously provides proactive advice based on our ongoing research. We conduct topical research that often culminates in recommendations and investment ideas for our clients. We can offer tactical advice (Medium-term Views) based on research conduct by our Global Asset Allocation team.

Below we list the research papers written in 2018. We are happy to provide any of these to PSERS upon request.

2018

- The Real Deal: 2-18 Retirement Income Adequacy at U.S. Plan Sponsors
- Commercial Real Estate Debt Overview
- Global Perspectives on Responsible Investing
- Rethink: Global Pension Risk Governance
- Key Components of Effective Investment Policy Statements for Non-Profit Organizations
- An Overview of the Multiemployer Pension Plan System
- Debating Active vs. Passive - The research is more nuanced than often acknowledged
- Banking on Pensions: Pension Financing in the Banking Industry
- 2018 U.S. Annuity Settlement Market Update
- Key Topics for Non-Profit Organizations in 2018
- Direct Lending: An Investment Opportunity within Private Debt

AHIC has extensive research resources capabilities to assist PSERS in special research projects by leveraging both our manager research and Investment Policy team to evaluate special topics or conduct board education on a number of topics such as the active versus passive management and Making portfolios more fee efficient for example.

Please see the **Appendix** section for copies of the below white papers that demonstrate our research capabilities and ability to help clients formulate investment strategies.

- Alternative Premia
- Alternative Price Bank Capital Relief
- Direct Lending: An Investment Opportunity Within Private Debt

2. ***Does your firm maintain a secure, client-facing platform that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools?***

Aon's client portal provides clients such as PSERS with direct access to Aon's complete investment manager research including manager ratings, operational due diligence reviews and reports, meeting notes, and thought leadership. New features are continuously being developed and tested with users. The information within the platform is interactive is automatically updated with the most recent data available. Aon is continuing to enhance our client portal and has partnered with Pivotal Labs to upgrade our entire global technology platform. The information within the platform is interactive and is automatically updated with the most recent data available.

3. Is all firm research, including proprietary research, available to clients regardless of the firm department in which it was created?

AHIC's research is available to clients regardless of the firm department in which it was created.

4. Is analysis available to clients through firm analysts and software comparing public market managers with their peers? How quickly is this information provided following request?

We provide benchmark and peer analysis of managers, which is provided in our performance reports on a quarterly basis.

Our performance system has peer benchmark information both at the plan level, i.e. Public funds >\$1 billion. This plan peer data is available both at the Total Plan and the major asset class level (i.e., Total Equity). In addition, AHIC's performance system has peer manager information for all major asset classes.

We view benchmarks as a way to understand an individual investment manager's opportunity set and as the context by which we can understand portfolio performance. Beyond this, we also look to peer universes to provide even greater context for manager performance.

We maintain data on many potential benchmarks in every asset class. We also have the ability to create custom benchmarks for our clients. Our systems and database are very flexible. Our approach generally is focused on identifying the best available benchmark based on the client's objective for the portfolio and the opportunity set used by the investment manager.

We believe asset-class benchmarks should be the broadest possible measure of that market. For equities, the Dow Jones Total Stock Market Index or Russell 3000 Index is used for U.S. stocks; MSCI All Country World Investable Market Index is used for non-U.S. and global equities. For fixed income, the Bloomberg Barclays Series indices are used, such as the Bloomberg Barclays Aggregate Bond Index, to reflect the appropriate quality and duration parameters of the fixed-income strategy employed.

We recommend assessing active manager performance over an entire investment cycle, or at least a three-year period.

- Peer Indices: Long- and short-term returns can be measured against a universe of peers
- Market Indices: Appropriate for evaluating long-term performance when aligned with the opportunity set

The finalized peer universe information is typically available 25–30 days after quarter end. Finalized reports with public asset class performance versus benchmarks and peers are available within 25–30 days of quarter end.

5. Outline the sources used to obtain data for publication of newsletters or periodicals. Include samples of your publications.

We have access to extensive outside research resources which are used for both raw data (such as Bloomberg and Ibbotson) and qualitative research. Data resources are used for proprietary investment research and client education materials. Qualitative research is regularly circulated among consultants, and the findings and impact are evaluated in light of our consultants' experiences. In combining external resources with internal sources, we work to keep abreast of important developments in the financial economies, while avoiding "flavor-of-the-month" investment philosophies and approaches.

We also have access to third-party proprietary software (Style Research) to perform holdings-based style analysis for equity and fixed income portfolios as well as other risk monitoring tools noted below:

- **Style Research Portfolio Analyzer (SRPA).** The Style Research Portfolio Analyzer (SRPA) provides objective holdings-based Style, Structure, Risk, and Performance insights for any domestic or international equity portfolio, fund or fund of funds investment. Covering around 40,000 stocks in 109 equity markets, SRPA provides both fundamental bottom-up Holdings-based *and* top-down Returns-based Style Analysis as well as monthly Performance (attribution) Analysis. Providing flexible Excel-based ready-to-print reports, it is ideally suited for the analysis of dynamically changing, international, equity portfolios.

Based on the holdings of a portfolio vs. its benchmark (or cash) at one point in time, this detailed analysis reveals the underlying structure (style exposures; style/size distributions, country/sector/stock active positions; risk analysis and risk decomposition; performance attribution; liquidity; currency hedging; etc.) of the portfolio. An analysis may be in a single country, or in a pre-defined or user-defined region.

- **eVestment Alliance.** Used to maintain electronically collected quantitative data from investment managers through detailed questionnaires. eVestment links seamlessly to our InForm system. eVestment Alliance serves as our primary screening tool for managers and strategies across the publicly traded asset class space. Hewitt Investment Group was one of the original clients of the eVestment Alliance database and has helped the firm build its product into a useful data tool.
- **Bloomberg.** Financial database resource that provides market news and data, as well as company analysis.
- **FactSet.** Provider of financial information and analytic applications to investment professionals around the globe.

In the **Appendix** section of this proposal, we include the following samples of our publications:

- Q1 2019 Economic and Investment Views
- Quarterly Investment Outlook - January 2019

6. Describe any other service not included in Part IV “Work Statement” that you believe would be beneficial to PSERS and that you are proposing to provide for PSERS.

We believe that the scope of work outlined in the RFP is comprehensive as it relates to the services that are typically performed by a general consultant. However, the nature of public funds today with complex investment programs is such that other investment-related issues often come up from time-to-time that need to be addressed. We are unique in that we also offer to our major investment consulting clients some resources of our Fiduciary Services and specialized Custodian teams. A list of some of these other services that we can provide to PSERS include:

- Board Self-Assessments
- Executive Director and CIO evaluations
- Master Trustee / Custodian Searches
- Insurance Contract Selection/Negotiation

7. State what you believe differentiates your consulting services from your competitors.

The following areas are our strengths and competitive advantages:

Proactive Advice, Investment Thought Leadership

Thorough research forms the backbone for all our positions and advice. In addition to conducting research on new developments across the capital markets and their ramifications on institutional portfolios, we constantly reassess and challenge our existing positions to ensure that they continue to hold merit. We believe our research, which ultimately forms the basis of our advice on policy and strategies, is well-regarded and widely published and that no other firm produces the quality and quantity of valuable research.

Expertise with Sophisticated Institutional Investors

AHIC has vast expertise in serving as a fiduciary and providing independent advice to clients that range in size from under \$3 million to \$554 billion in assets (as of June 30, 2018). Our client base is diverse and exposes us to best practices among public funds, corporate funds, endowments and foundations.

Public Sector Knowledge

We currently work with 32 public fund retainer clients with total assets of \$1.518 billion as of June 30, 2018. We understand and appreciate the nuances of working in the public sector.

Customized Advice, Client Partnerships

We aim to deliver a high-touch service and engage in the long-lasting partnerships with our clients. Our advice is highly customized and reflects a thorough understanding of each client: their history, their goals and their practical realities. No two clients are alike and so we have no preconceived assumptions about what is best for them. We listen, we learn and we embrace the opportunity to work with forward thinkers on non-traditional approaches to prudent investing. We believe that our decades of experience working with non-standard and forward-thinking clients will serve PSERS well in successfully fulfilling its fiduciary responsibilities.

Alternatives Expertise

Our dedicated team of nearly 100⁶ alternatives professionals specializes in private equity, liquid alternatives (i.e., hedge funds) real estate, infrastructure, commodities, timber, and other alternative assets (as of September 30, 2018). We have experience building and overseeing both direct and fund-of-funds-oriented alternatives programs. We also believe we add value to clients' alternative investment even when they employ other firms to act as specialist consultants. We are a valuable "second set of eyes and ears."

Fiduciary Services Practice

Aon has a dedicated team in the Fiduciary Services practice that provides services beyond traditional investment consulting. It's a differentiator for Aon. Much of the work the Fiduciary Services provides is related to an organization's governance, how the fiduciaries exercise their authority as well as how decisions are made, documented and implemented. We focus on assisting clients to enhance their governance framework designed to mitigate fiduciary and governance risk, clearly define and document roles, responsibilities, and reporting requirements, facilitate procedural prudence, aid transparency and accountability, and avoid the unexpected. As part of delivering fiduciary and governance services, we regularly work with defined benefit plans, defined contribution plans, healthcare trusts, various investment trusts, endowments and foundations. We consistently see and advise on industry common and best

⁶ Total combined Alts research staff as of 9/30/2018, includes AHIC and its global Aon affiliates.

practices. Our exposure to a wide range of funds makes us well-informed consultants, able to deliver the fiduciary and governance services that PSERS is seeking.

Operational Due Diligence Specialized Team

Our dedicated global Operational Due Diligence team includes 20 persons (as of January 1, 2019) provides in-depth due diligence on all Buy rated managers. Our team has diversified experience with a range of competencies including compliance, operations, governance, and counterparty risk. In addition, our experience not only includes conducting operational due diligence reviews for an internal ODD program but also in a consulting environment, which has unique demands given the range of underwriting standards and deadline/workflow requirements for clients.

Innovative Tools

We have devoted significant resources to our analytical capabilities for maintaining capital market assumptions, asset allocation modeling, asset-liability modeling, risk budgeting, style analysis (both returns-based and holdings-based), and spending model analysis. Many of our models are built in-house and can be custom-tailored to suit individual client needs. We review our processes and tools on an ongoing basis to ensure they are up to date and meeting our needs, as well as our clients' needs.

Talent Depth

In the U.S., we have 365 employees dedicated to investment consulting services as of September 30, 2018. The firm has dedicated resources committed to every critical investment area in which clients may seek advice. Deep professional strength allows us to dedicate resources to research opportunities, conduct due diligence, and develop client-specific solutions to meet individual needs.

Our Culture

Our organization fosters a culture that: 1) challenges conventional thinking, 2) produces original research and analysis, with an orientation toward practicality of advice, 3) synthesizes our best thinking from a diverse set of professionals into a well-reasoned, firm-wide perspective on issues, and 4) puts the clients' interests first, without exception.

- 8. Explain in detail any potential for conflict that would be created by your firm contracting with PSERS, including other client relationships that may inhibit services to PSERS and/or the other clients.**

AHIC does not perceive any actual conflicts of interest in providing investment consulting services to PSERS.

- 9. How does your firm resolve potential conflicts of interest in recommending or making investments in prospective programs among clients?**

In all aspects of our investment consulting practice we seek to avoid any real or potential or even perceived conflicts of interest. We do not accept fees or gratuities from managers. Our ethics policy is very strict in this regard.

Furthermore, AHIC's Conflict of Interest Policy states that the firm's manager recommendations are available to all clients at the same time regardless of scope of our relationships, size of the consulting fee, or size/type of client.

Please see the **Appendix** section for our Code of Ethics. When a change of rating occurs, all of our consultants and their clients receive the updates at the same time.

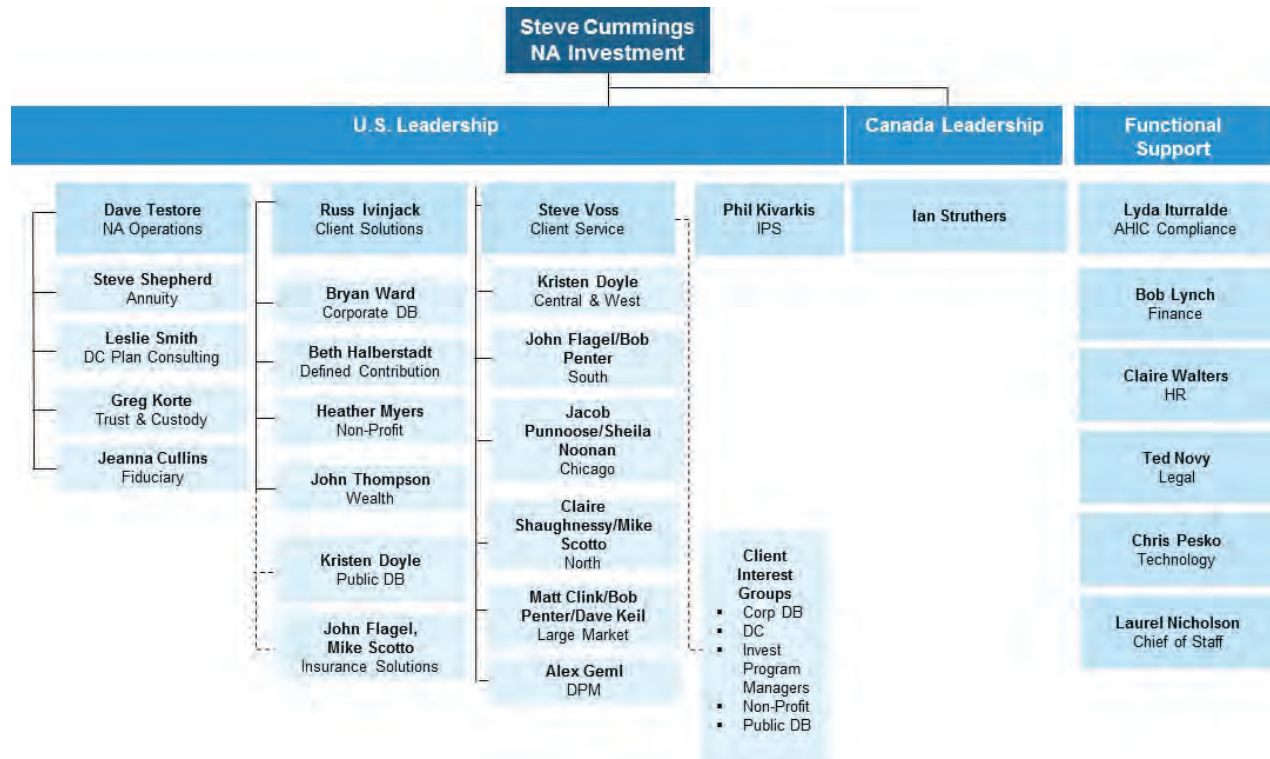
III-6. Personnel Qualifications

A. Provide an organization chart showing name, title, function, and area of expertise of pension fund consulting professionals and support staff.

Please refer to the below organizational charts:



Data as of June 30, 2018.



Data as of June30, 2018



¹As of September 30, 2018. Some team members have cross team responsibilities; includes AHIC and its global affiliates through participating affiliate agreements.

²As of September 30, 2018, Offshore, Innovation, and Support staff represent an additional 33 colleagues. Some team members have cross team responsibilities or reporting lines outside the manager research function, includes AHIC and its global Aon affiliates; does not include The Townsend Group.

B. For proposed primary consultant, principal assistant, and risk professionals, provide the names of all clients and nature of engagement for which these individuals assume a similar role. What are their other duties for the firm?

We have assembled a highly qualified team to help ensure that PSERS will continue to receive a responsive, client centric approach to serve your specific needs. AHIC's goal is to provide PSERS a team of experts with the experience to exceed your expectations. Claire Shaughnessy, Amanda Janusz, and Darren Moran will continue to provide the day-to-day investment consulting needs to PSERS. In addition to Claire, Amanda and Darren, Kevin Vandolder will join the team as the lead consultant for the new Defined Contribution Trust. Kevin is AHIC's leader of our DC practice. Other key resources of the PSERS relationship include: Jeanna Cullins, who will continue to serve as PSERS Fiduciary lead consultant, Rian Akey, Global Head of Operational Due Diligence and Operating Monitoring for AHIC will continue to lead operations risk assessments for PSERS investment managers, and Phil Kivarkis, Head of Investment Policy will continue to lead the annual Asset Allocation and Policy review for PSERS. Lastly, Stephen Cummings will be the Executive Sponsor for the PSERS relationship and provide back-up consulting support to the team. The proposed PSERS consulting team will be based out of the Norwalk, Connecticut and Chicago, Illinois offices. We have provided the client lists for Claire, Kevin, Amanda, Darren and Stephen. Rian does not have a specific client list. Data below as of February 01, 2019.

Claire Shaughnessy's Clients			
Name	Plan Type	Length of Relationship	Client Account Size
AIG	Corporate	13 years	\$9.5 billion
New York State Teachers' Retirement System	Public	8 years	\$120 billion
Pitney Bowes	Corporate	8 years	\$1.5 billion
Pennsylvania School Employees' Retirement System	Public	5 years	\$55 billion
State of Connecticut	Public	7 years	\$3.5 billion
University of Rochester	Non-Profit	8 years	\$4.6 billion

It is not known whether clients listed approve or disapprove of AHIC or the advisory services provided.

Kevin Vandolder's Clients			
Name	Plan Type	Length of Relationship	Client Account Size
Massachusetts Deferred Compensation	DC	9 years	\$10 billion
Public Employees Benefit Association	DC	3 years	\$8 billion
Confidential Client	DC	4 years	\$17 billion
City of Jacksonville	DC	Just hired	\$1 billion

It is not known whether clients listed approve or disapprove of AHIC or the advisory services provided.

Amanda Janusz's Clients

Name	Plan Type	Length of Relationship	Client Account Size
Acushnet Company	Corporate	7 years	\$591 million
Consumer Reports	Non-Profit	5 years	\$285 million
DaVita Inc.	Corporate	8 years	\$1.7 billion
GBMC Healthcare	Non-Profit	24 years	\$667 million
MassMutual Financial Group	Corporate	5 years	\$5.5 billion
Montefiore Health System	Non-Profit	18 years	\$1.1 billion
Pennsylvania Public School Employees' Retirement System	Public	5 years	\$55 billion
TJX Companies, Inc.	Corporate	13 years	\$3.4 billion
Visa International	Corporate/Non-Profit	14 years	\$3.4 billion

It is not known whether clients listed approve or disapprove of AHIC or the advisory services provided.

Darren Moran's Clients

Name	Plan Type	Length of Relationship	Client Account Size
AICPA	DB/DC/Operating	7 years	\$126 million/\$167 million/\$113 million
American Standard	DB	7 years	\$40 million
Leonardo DRS, Inc.	DC	7 years	\$800 million
Confidential Client	Endowment	5 years	\$50 million
Long Island University	DC	5 years	\$900 million
Rensselaer Polytechnic Institute	DB	7 years	\$270 million
Tufts University	DC	5 years	\$1.4 billion
First Energy	DB/NDT	2 years	\$7.7 billion/ 2.4 billion
PSERS	DB	5 years	\$54 billion
NBA	Other	3 years	\$150 million
FujiFilm Dimatix	DC	5 years	\$72 million
AEP	DB	1 year	\$5.2 billion

It is not known whether clients listed approve or disapprove of AHIC or the advisory services provided.

Stephen Cummings' Clients

Name	Plan Type	Length of Relationship	Client Account Size
Colorado Public Employees' Retirement Association	Public	15 years	\$48 billion
Minnesota State Board of Investments	Public	2 years	\$70 billion
New York State Teachers' Retirement System	Public	9 years	\$118 billion

Stephen Cummings' Clients			
Name	Plan Type	Length of Relationship	Client Account Size
Pennsylvania Public School Employees' Retirement System	Public	5 years	\$55 billion
State Board of Administration of Florida	Public	23 years	\$188 billion
Michigan Department of Treasury	Public	4 years	\$78 billion

It is not known whether clients listed approve or disapprove of AHIC or the advisory services provided. List is as of June 30, 2018.

- C. Delineate the proposed management of services to PSERS. Provide names of staff who will serve as primary consultants, principal assistants, and other general contacts with your firm. Specify the role and scope of involvement for each individual. Will the primary consultant be available to attend all Board meetings and assist PSERS' Investment Professionals when needed?**

Claire Shaughnessy, CFA, partner, serves as the defined benefit lead consultant with Kevin Vandolder, CFA, partner, serves as the defined contribution lead consultant to PSERS. In addition, Jeanna Cullins will serve as PSERS' fiduciary lead consultant and Stephen Cummings will serve as the Executive Sponsor. Members of the team will continue to be available to attend all PSERS Board/Committee meetings to present research and recommendations. In addition, they will be available for conference calls and ad hoc meetings with Board/Committee members and Staff.

In addition to Claire and Kevin, the team would also consist of Amanda Janusz, senior consultant, and Darren Moran, senior consultant. They will provide day-to-day support and will supervise the production of all research and reports, ensuring the quality of the data provided in our reports. Robert Leal and Andi Papadimitriou will perform much of the data/analytical work on the relationship.

PSERS will also have direct exposure to dedicated resources within our specialized teams—for instance, the Investment Policy Services team, Global Investment Management, and Fiduciary Services. Different clients engage with us in different ways. Our consultants are very collaborative and work well together for the benefit of the clients.

- D. For proposed primary consultant, principal assistant, risk professionals, and other key individuals who will be providing services to PSERS, provide a biographical profile to include education, years and areas of professional investment consulting experience, and years and areas of professional investment consulting experience with your firm.**

Following are brief biographies of the PSERS consulting team (as of January 1, 2019):

Claire P. Shaughnessy, CFA

Partner, Lead Defined Benefit Consultant

Claire is a partner. For the past 18 years, she has worked as a lead consultant with a focused group of institutional clients including public and corporate pension funds, participant directed plans, and foundations to build successful investment programs. She has worked with many of the nation's leading investment programs during her consulting career and is the lead consultant to several large public funds including New York State Teachers Retirement System and Pennsylvania Public School Employee' Retirement System. Claire brings to the team significant experience in asset allocation, investment program design, investment manager selection, and performance and risk analysis. She has implemented investments in all major asset

classes across the capital structure (cash, fixed-income, equities, hedge funds, private equity and real estate). During her consulting tenure, she has assisted several clients develop and implement an investment strategy incorporating new asset classes including emerging markets, real estate and hedge funds.

She has over 25 years of institutional investment experience. She has been a speaker at industry conferences on a number of topics including using alternative investments within defined contribution plans, emerging markets and implementing fixed income strategies within a de-risking framework. Prior to joining the firm, Claire was a Managing Director of Investment Consulting at Rogerscasey. Prior to Rogerscasey, she worked with clients at Lazard Asset Management and Scudder Stevens & Clark. She began her investment career at The Equitable.

Claire holds a Masters of business administration degree from The Stern School of Business at New York University and graduated magna cum laude from Georgetown University with a Bachelor of Science in business administration. She is a holder of the CFA Institute's Chartered Financial Analyst (CFA) designation.

Kevin J. Vandolder, CFA

Partner, Lead Defined Contribution Consultant

Kevin, Partner, serves as the firm's DC Client Practice Leader—a position he has held almost two decades, while serving as lead consultant for a couple of projects and retainer clients. Kevin has more than 20 years of experience serving defined contribution plan clients and researching defined contribution issues. Before joining Aon Hewitt Investment Consulting in 1996, Kevin was in the corporate finance group of the \$9 billion Westcoast Energy group of companies and had previously served in the Canadian Navy (reserve) and Presbyterian World Service.

Kevin joined the firm in 1996 and has worked with large/mega defined contribution plans throughout his tenure with the firm. He has 24 years of institutional investment consulting experience.

Kevin holds an M.B.A. in strategy and leadership from NYU Stern and Honors B.Comm. degree in finance from the Odette Business School at the University of Windsor. He is a CFA charter holder and active member of the CFA Society of Austin, previously serving as President and Treasurer of the CFA Society of Chicago. Kevin remains active on CFA Institute committees while serving many years as a grader for the Chartered Financial Analyst examination and speaker at local CFA Societies including NYSSA.

Kevin's published research and blog entries includes pieces on innovative investment option structure, how to improve DC participant retirement outcome and wellness and on global DC opportunities and challenges along with presentations at NAGDCA on Alts in a DC Plan.

Kevin has also served as a guest lecturer at DePaul and Northwestern University while serving on industry organizations such as the Executive Committee and founding member of the Defined Contribution Institutional Investment Association and chair of its Global DC investment committee and speaking at industry conferences such as key note speaker at FRA/DCIO DC Conference [and the](#) World Bank retirement conference fall.

Amanda Janusz

Senior Consultant

Amanda is a Senior Consultant based in our Norwalk, CT office. She joined AHIC in 2007 and has 11 years of investment experience. Amanda advises clients on their investment policy, asset allocation, investment structure, investment manager evaluation and selection, and performance evaluation. Her clients include public and corporate pensions, endowments, 401(k) and 403(b) plans. While Amanda works with AHIC's

client service team, her experience also includes a six-month rotation working with the Global Investment Management (GIM) team in Aon's London office.

Amanda has a B.A. in Economics from Williams College and an M.B.A. in Finance from the University of Connecticut.

Darren Moran

Senior Consultant

Darren is a senior investment consultant based in our Norwalk, Connecticut office. He consults with defined benefit plans, defined contribution plans, endowments, and foundations on investment policies, asset allocation strategies, investment manager evaluation and selection, and performance evaluation.

Darren joined the firm in 2011. He graduated with a B.A. in finance from Bryant University and an M.B.A. from Fairfield University.

Jeanna M. Cullins

Partner, Leader of Fiduciary Services Practice

Jeanna is a recognized institutional investor industry expert with 30+ years of experience across a wide range of fiduciary, governance, and operational processes issues. Jeanna has advised the leadership of some of the largest public funds in the country, corporate funds, endowments and foundations on how to develop effective, efficient, and practical ways to fulfill their fiduciary responsibilities and enhance their governance and investment operations. Her key areas of focus include conducting fiduciary reviews and governance diagnostics, fiduciary and governance training, assisting with strategic planning, conducting board and key staff evaluations, policy and process development and implementation, reviewing compliance and risk controls, and other related issues. She is a frequent speaker at pension industry conferences on various topics, including pension fund administration "best practices."

Prior to joining the AHIC in 2008, Jeanna served as Managing Director and Operational Review Practice Leader at Independent Fiduciary Services ("IFS"). During her 10-year tenure at IFS, Jeanna worked on more than 30 fiduciary/management audits, including audits of Pennsylvania SERS and ERS.

She served as Executive Director to the District of Columbia Retirement Board from 1993 to 1997, and as the Board's General Counsel from 1985 to 1993. She earned her J.D. from Georgetown University Law Center and a B.A., cum laude, from Brooklyn College, City University of New York.

Jeanna serves on the emeritus board and is an active member of the National Association of Public Pension Attorneys. She is also a retired Director of the Hershey Entertainment and Resorts' Board, where she was Chair of the Governance Committee and a member of the Audit Committee. She also currently serves on the Investment Advisory Panel for the Illinois Student Assistance Commission and previously served as Vice President of the YWCA of Metropolitan Chicago Board and a member of the Executive Management Committee for seven years. Jeanna is a National Association of Corporate Directors Governance Fellow, a Chicago United Business Leader of Color, and was named a Top Employee Benefit Consultant by Human Resource Executive and Risk & Insurance magazines.

Steve Cummings, CFA

Global Investments Officer and Head of North America Investment Consulting

Steve Cummings is the Global Investment Officer and Head of North America Aon Hewitt Investment Consulting, one of the largest providers of investment consulting services to institutional investors. He leads over 400 investment consulting professionals with over 470 clients. Cummings serves as the primary

consultant for select retainer and project clients. Cummings is ultimately responsible for the success of the North America investment consulting practice.

Cummings' client work has included the coordination and implementation of multiple defined benefit and defined contribution plans into a consolidated structure for a multi-billion dollar corporate client and the oversight of complex alternatives programs for several large public funds. He also served as the team leader for Aon Hewitt Investment Consulting's work with the U.S. Treasury Department during its TARP initiative and served as advisor to the State Treasurer and interim CIO of a multi-billion dollar state retirement system during a transition period between CIOs.

Cummings co-leads the firm's Global Investment Executive Function, the group responsible for setting the strategic direction of the global investment consulting practice and coordinating consulting efforts around the world. Cummings is responsible for thought leadership within the firm and serves in an advisory capacity on research efforts such as those related to derivatives, private equity, and emerging investment opportunities. He is a sought-after industry expert and frequently speaks before industry groups on a broad range of topics including soft dollars, public fund oversight, portfolio construction, and the evolution of the consulting industry.

Cummings joined EnnisKnupp (the predecessor firm to Aon Hewitt Investment Consulting) in 1989 as a consultant and later rejoined in 2000 as the president and Chief Executive Officer. Prior to rejoining EnnisKnupp, Cummings was the president of Marquette Associates from 1997–2000. He holds a B.S. degree from the University of Texas and an M.B.A. degree from the University of Chicago. He is a CFA charterholder and is a member of the CFA Institute and Investment Analyst Society of Chicago (IASC). He is also a member of the Board of Trustees of Kohl Children's Museum of Greater Chicago.

Rian Patrick Akey

Partner, Global Head of Operational Due Diligence and Monitoring

Rian is the Global Head of Operational Due Diligence; he joined Aon Hewitt in 2015. Rian is responsible for developing and implementing operational risk identification and reduction strategies across Aon Hewitt's global client portfolios, which have exposure to thousands of investment managers globally, across all asset classes.

Rian was previously a Principal at Mercer Investments, working within the firm's specialty operational due diligence practice. His role at Mercer offered perspective on financial and operations best practices among some of the world's most well-known and highly regarded asset management firms. He joined Mercer in 2011.

Rian has been working in the financial industry since 1997. Prior to Mercer, he was the COO at Cole Partners, a Chicago-based hedge fund consultancy, and its investment adviser affiliate, Cole Partners Asset Management. He joined the Cole Partners organization in 1999 as the founder's first hire and over twelve years he developed and implemented the firm's research procedures, operations, and compliance. In 2005, he keyed the launch of the firm's first proprietary fund of funds, a specialty product dedicated to alpha-based commodity and natural resource investments.

Rian received a BA *cum laude* from the University of Notre Dame. His research on the relative merits of alpha and beta in commodity investments has been published in a variety of journals and books and has been delivered to conferences and symposiums around the world.

- E. Provide name and position of pension fund consulting professionals who were added to the firm during the past three years. Provide name and position of pension fund consulting professionals who left the firm during the past three years. Have any senior executives left or joined the firm in the past**

five (5) years? Please describe the circumstances of their departure(s) or their current roles. Please provide a description of your succession and continuity plans for management of the firm.

AHIC's public sector team is co-led by Kristen Doyle and Mike Comstock as our Client Practice Leaders. Kristen and Mike are responsible for new business development and ensuring that AHIC has the right resources, research, and expertise available for the public sector. In addition, AHIC has a Public Fund Interest Group comprised of 37 individuals, which is a subset of consultants who specialize in issues facing public pension funds (as of December 31, 2018). Our Public Fund Interest Group shares news, issues, and best practices from public retirement system and state investment board clients. We regularly rely on this group of consultants for research, internal discussions, and dissemination of important information to our clients. The depth of public fund knowledge and experience at Aon benefits all of our large public pension funds.

In addition, we have 15 lead consultants who focus on public fund clients although they are not fully exclusive. These individuals are also supported by a group of senior consultants in working with public funds.

We do not specifically track the professionals who have joined and left the firm by plan type. However, the following table provides a breakdown of the associate partner and partner level employees who have joined and left the firm over the past three years (January 1, 2016 through December 31, 2018). In the past five years, we have had 2 senior partners depart our firm. No senior partners joined in that same time period (as of December 31, 2018). The senior partners are included in the table below. Due to employee confidentiality reasons, we are unable to provide employee-specific reason for hire or departure information. Furthermore, it is our standard policy to not release the names of our staff.

Year	Hired Professionals	Departed Professionals
2016	10	6
2017	10	11
2018	6	8*

*2 are retirement

Update dates to be January 1, 2016 – December 31, 2018

Succession planning is important, so that our clients' business needs are not interrupted. While we have a low staff turnover ratio, we understand and are prepared for the fact that some staff turnover is unavoidable. To ensure it is there when needed, we approach continuity from several vantage points to ensure all the bases are covered:

- Deep teams with a strong secondary Investment Program Manager leading day-to-day activities
- A common research platform upon which all of our client recommendations are based—materially reducing the impact of the individual assigned
- Knowledge sharing, with broad understanding of client needs and objectives
- Comprehensive databases with our history of working together
- Senior leadership support and involvement

Our teams further ensure continuity by focusing on continual knowledge sharing among team members, so there is not just one team member who understands your business, the initiatives we have undertaken, and the status of ongoing projects. The entire team is kept apprised of all activities.

Additionally, we maintain a comprehensive database for PSERS that includes every document and key emails that provide a complete history regarding our work with PSERS. In the event of a staffing change, this database allows the new Investment Program Manager access to all relevant historical information. Moreover,

the tools and processes we use represent core competencies for our senior Investment Program Managers so there would be a very manageable learning curve should a replacement be needed.

F. *How does the firm monitor performance of consultants, analysts, and other investment professionals that it employs?*

AHIC is committed to providing high quality deliverables to our clients. Our Practice has instituted a formal sign-off process that documents the fact that peer review has occurred. Our internal review process assures the following:

- All personnel and service offices are conforming to Practice approved procedures and policies, and that our best thinking is being shared with clients in a uniform and consistent manner.
- Consultants are identifying trends.
- Proper images and branding are utilized in our deliverables.

All substantive work products are reviewed by qualified colleagues, and the reviews are sufficiently broad in scope. Qualified individuals acting as peer reviewers must be able to state that they have confidence in the quality of the aspect or portion of work they've been asked to review. Key aspects of the peer review process address the following:

- Results are technically correct in mathematics and processes.
- Results are reasonable, consistent with prior deliverables.
- Assumptions and methods used are reasonable.
- If the deliverable is a special project customized for a particular client, then a member of the specialist team (i.e., asset liability modeling/policy team) should also peer review the deliverable.
- The deliverable fairly and completely provides results, analysis, choices and implications, and is understandable to the intended audience.
- The deliverable effectively responds to the client's business issue.

G. *Provide a brief general description of the firm's compensation agreements for professional staff, including bonuses, profit sharing and equity ownership. Is some component of compensation deferred? Does your firm have employment contracts and/or non-compete agreements with investment professionals?*

Consultants are compensated through a combination of base salary commensurate with industry standards and bonuses based on individual contributions, as well as success of the group and firm as a whole. The success of our business is driven by providing high quality service to our clients and creating long term relationships. A consultant's future employment is predicated in large part on his or her ability to serve clients well. Our efforts to attract and retain high quality professionals include regular review of our compensation policies to ensure our compensation structure appropriately rewards for work effort, productivity, quality of work, and client retention.

In addition, nonmonetary benefits are provided, including work environment free from conflicts of interest, ability to pursue education (e.g., graduate degree, CFA designation, and relevant coursework), ability to perform a variety of functions, and access to leading edge industry information and technology.

All of our investment consulting staff receives a salary and bonus. Partners (and/or Principals) are also eligible for stock ownership.

AHIC does not maintain employment contracts and non-compete agreements with investment consultants.

H. Describe the job qualifications required by your firm when hiring investment professionals. Are there specific qualifications unique to those involved in investment consulting?

AHIC's recruiting and hiring process focuses on candidates with significant investment-related industry experience, which typically includes three to five years of analytical work in investments and finance. Consultants are expected to have a CFA, FSA, or CERA designation and/or MBA degree, or should be in the process of obtaining a designation/ degree. AHIC financially supports all investment educational programs including MBA degrees, CFA charters, and other certificate programs.

I. Describe your internal training procedures for consultants and research analysts.

Our new associates go through an in-depth training program known as AHIC University. AHIC conducts quarterly associate education sessions in our headquarters office. The two day-long sessions focus on all investment-related aspects of pension plan management including asset/liability analysis, asset allocation modeling, manager selection and retention, risk analysis, etc. The session includes break-out sessions focused on specific fund type (e.g., public pension plans, endowments and foundations).

III-7. Soundness of Approach

A. General Consulting Services (includes all asset classes)

1. What is the overall philosophy of the firm regarding an investment consultant's role with respect to the board of trustees, staff, and investment managers?

AHIC sees itself as being a trusted advisor to the fiduciaries on the Board and staff. Generally, our engagements call for us to work for the Board (as the highest-level fiduciary in the organization) and with the staff (as the ones responsible for the day-to-day management). We handle this role well and believe one of our greatest strengths is that we work effectively with both trustees and staff.

Our role with respect to managers is completely different. We are not a fiduciary to them. We have an arm's length, yet cordial relationship with managers. We strive for a good information flow between us because our job is to evaluate and monitor them fairly. Additionally, investment managers provide us up to date and relevant information on their firm and products, and, we in turn, keep them abreast of our clients' needs. We also provide them full transparency on our ratings of them.

2. State as clearly as possible the firm's investment philosophy. Are there any fundamental beliefs about capital markets which underpin the firm's investment advice to its pension plan clients? Include discussion on your views as they pertain to varying investment environments (e.g., inflationary, recessionary), and on the separation of alpha from beta.

Our investment consulting philosophy is grounded in a few core tenets that we believe have a bearing on the success of an investment program.

- Seek broad diversification and global orientation
- Avoid significant and unintended biases
- Take risk efficiently

- De-emphasize strict reliance on quantitative assumptions and optimization
- Emphasize flexibility and opportunistic approaches to benefit from skill
- Control costs

AHIC's investment beliefs are outlined below.

- The best investment policy is customized to individual client circumstances, goals and risk tolerance
- The most important decision for long term investment results is asset allocation
- The primary method of targeting a level of portfolio risk is the allocation to and among return seeking and risk reducing assets, and structure within those asset categories, taking into consideration exposures to equity, real interest rate, credit, inflation, liquidity and active risks
 - Return seeking assets are those with the primary purpose of generating returns
 - Risk reducing assets are those with the primary purpose of risk reduction
- A disciplined rebalancing process with narrow ranges around policy targets works best.
- Alternative investments can enhance portfolios if a significant commitment is made to them.
 - Alternatives can play a meaningful role for investors with sufficient tolerance for illiquidity, active and other risks;
 - Focus your active risk budget on alternative investments
- Investors benefit from having a global orientation
- Investors should avoid material biases toward particular segments within public market asset classes in their long-term investment policies
- Active management is a difficult endeavor and, therefore, passive management is preferred across publicly traded asset classes.
- Active risk is rewarded if highly skilled managers are used..
- There are significant variations in efficiency among markets, but also variations in trading costs, market size, and other factors that influence investors' ability to exploit those inefficiencies
 - AHIC does not promote active management for any asset category, based solely on a market efficiency argument
 - The client's decision regarding appropriate market exposures should override the implementation decision; that is, asset allocation should not be driven by relative opportunities for active management in various markets
- It is important to understand potential sources of risk in the portfolio and build risk reducing allocations in the portfolio as appropriate
- Reducing investments cost and maintaining sufficient liquidity are also important considerations for investors

While the advice we give clients uniformly reflects these basic beliefs, we do not follow a formulaic approach to the evaluation of investment policies and practices. Instead, we endeavor to understand the particular circumstances of each client and develop our advice accordingly. In short, our focus on developing sound strategy; prudent implementation with a focus on risk control, cost containment and the avoidance of surprises; rigorous monitoring and reporting to ensure performance as planned, results in superior performance for our clients.

We believe optimal investment decisions are made when they are based on a clear understanding of the assets and liabilities of the plan and how they interact. It is because of this conviction that we formed a

dedicated team of asset/liability specialists made up of both actuarial and investment consultants, to support pension plans during an asset/liability study. This philosophy has only intensified since the great recession, as the risks and associated mismatch between pension assets and liabilities were magnified, leaving plan sponsors with a significant pension deficit and rising pension costs at the worst possible time.

We have developed tools that allow clients to understand the implications of the chosen investment strategy/asset allocation on key plan financial metrics (such as funded status, level of contributions) in a range of market and economic environments. We have found that this to be a useful tool to allow decision makers to fully understand and appreciate the sensitivity and expected outcomes of a given strategy.

Over the years we have incorporated several features to our asset/liability modeling capabilities that have enhanced its value to decision makers. Some of these include: scenario analysis and stress testing capabilities to study impact of contribution and funded status in varying economic regimes (for instance, low-growth, high-inflation environment), modeling that recognizes that financial markets are not “normally distributed” and that in reality three-standard deviation events occur more frequently than statistics would indicate. These real-world enhancements to our model allow for a more robust and practical set of solutions based on which clients can determine the appropriate risk posture.

3. *What are the most critical issues to consider in establishing investment policy for a public sector DB pension plan? DC?*

From a high-level perspective, the main objective for a pension plan investment policy is to provide a framework to manage the plan in a sound manner. In essence, it is a roadmap that provides guidance on a variety of key areas touching the retirement program.

With a defined benefit plan, there is a holistic investment perspective as the plan assets in their entirety seek to satisfy the liabilities, and importantly, these liabilities remain regardless of the performance of the assets. The goal of a defined benefit plan's investment policy is to provide an understanding of the key factors driving the willingness and ability to accept risk, the investment approach for meeting the liability obligations of the plan and measuring the success in doing so.

When establishing or reviewing investment policy, we will address the following key issues for a defined benefit plan:

- What is the role of the Board?
- What is the role of the staff? What has been clearly delegated by the Board?
- Are roles, responsibilities and reporting requirements clearly defined?
- Does the policy reflect best practices in the industry?
- Is there a mechanism for period review of the investment policies?
- How are return and risk related? What is the philosophy and attitude towards risk?
- Is the portfolio efficient?
- Does the portfolio make sense within the context of the plan's current state?
- What are the strategic asset allocation targets?
- What are the pros and cons of various asset classes?
- How much liquidity is needed in the fund?
- What is the most appropriate investment management structure?

- What are the most appropriate guidelines for each portfolio?
- What are appropriate market index and peer group benchmarks for each portfolio (total fund, asset classes, and individual managers)?
- How will the investment program be monitored over time?
- How will plan costs and investment management fees be monitored?

From a high-level perspective, the main objective a DC plan investment policy is to provide a framework for a plan sponsor and its designees to manage the plan in a sound fiduciary manner. In essence, it is a roadmap that provides guidance on a variety of key areas touching the retirement program. We believe it is crucial for the investment policy of a DC plan to reflect the following factors:

- **Investment option structure is important.** We believe the investment option structure has a significant impact on the behavior of participants. Research has shown that too many options can cause participants to “do nothing” or to make inefficient investment decisions. We also recognize that too few options or a structure that excludes key asset classes can limit the ability to construct an optimal portfolio. A policy should summarize the background on the Plan’s structure and resultant investment menu.
 - We tend to favor plans with a limited number of investment options. We believe offering much more than 10–12 options can begin to overwhelm the majority of participants. It is important to strike a balance of offering the number and types of options that allow the more investment savvy participants to construct their own portfolios, but without intimidating the average participant with little or no investment knowledge.
 - For several years we have recommended our clients consider separating the investment options into tiers in order to better facilitate participants’ decision-making process. For example, tier one would be a suite of lifecycle/target date funds and tier two would be composed of low-cost index funds that would provide broad coverage of the capital markets along with a capital preservation option, such as money market or stable value. If desired, a third tier would be a menu of select actively managed options that can be utilized to construct a diversified portfolio. If additional choice is desired, a fourth tier representing a self-directed brokerage window could be offered.
 - **Well-defined responsibilities and process.** In addition to a well-defined structure, it’s critical that a policy statement outline the specific fiduciary duties for those involved in Plan management and the governance process for monitoring product performance and fees. The roles of the Fiduciary Committee, Investment Advisor and Investment Manager, as well as any other party that impacts the Plan, be clearly defined.
 - **Well-defined benchmarks.** Clearly defining the objectives and basis for evaluation of the Plan’s investment options is critical. All investment strategies should have a primary benchmark and stated objective. For example, a large cap equity index fund should be expected to reasonably track its index (e.g. S&P 500) over a defined period of time (3–5 years).
 - **Every plan is different.** While we have developed our “best thinking” on various issues that affect defined contribution plans, we acknowledge that each plan has a different participant base and that plan-specific demographics and circumstances will largely determine the appropriate services and funds to offer participants.
4. ***Please summarize, in one page or less, the firm’s investment consulting capabilities and expertise. What are the firm’s major strengths and limitations? Do you provide any services which are not provided by other investment consultants? Why should PSERS engage you as its investment consultant?***

AHIC has the following specialties and strengths that we believe differentiate us from our competitors:

- **Culture of Innovation and Thought Leadership:** One of our key distinguishing attributes is the thought leadership we provide. We dedicate significant time and resources to research on emerging topics of interest and of benefit to our clients. This research is the backbone of our investment advice and influences all of our recommendations. We are pleased that our research has received widespread recognition and commendations over the years and is frequently published and referenced in financial industry journals.

Our research covers a wide variety of topics and has been used to add value to client portfolios across a range of areas. As an example, recent research papers on timely and attractive investment strategies, such as alternative risk premia strategies, reinsurance, and opportunistic credit, have provided clients with attractive and diversifying investment ideas at a time when traditional equity/bond portfolios are not expected to meet the needs of most institutional investors. Our research provides clients with the education and actionable next steps to efficiently implement appropriate ideas.

- **Experience With Sophisticated Institutional Investors:** AHIC has experience in serving as a fiduciary and providing independent advice to clients that range in size from under \$3 million to \$554 billion in assets (as of June 30, 2018). Our client base is diverse and exposes us to best practices among public funds, corporate funds, endowments, and foundations.
- **Public Fund Experience:** Having worked with public funds since our founding in 1981, we have an uncommon appreciation of their needs, circumstances, as well as the challenges that they face. The collective insights that we have gained guides our thinking both on policy issues (asset allocation and structure, etc.) as well as implementation issues (types of managers and strategies, etc.). The fact that we have been retained as trusted advisors by 32 public fund clients with \$1,518 billion in assets under advisement (as of June 30, 2018) stands as a testament to our commitment to public pension funds.

This experience enables our consultant base and research groups to speak knowledgeably to our client base regarding peer practices and to stay apprised of the most recent issues facing public plans, and importantly how others are addressing them. We are able to act as a source of knowledge for our clients on various investment, governance and plan-specific topics.

- **Comprehensive, Customized Advice, Integrated Approach:** We believe that the depth of knowledge of our investment consulting staff combined with the ability to provide a comprehensive, integrated solution to our clients that is highly customized to their circumstances is a source of significant advantage. Additionally, given that we work with large public funds that often utilize multiple consultants, we are very accustomed to working in conjunction with a fund's other consultants. We serve several relationships where we serve as the generalist consultant and work with the client's other consultants in specialized areas.

We believe our customized approach to client service allows for the most efficient working relationships between consultant and clients. We strive to understand the needs of our clients and to address in a manner that is suitable for each individual client. Our focus on feedback and communication ensures time is not wasted on relationship or communication issues, but rather on the topics that truly matter.

- **Asset Class Specialists:** Our consultants who are generalists have the advantage of collaborating with asset-class specialists, part of the firm's GIM team, who are seasoned professionals. Many have been practitioners and plan sponsors. They have experience in equities, fixed income, real estate, hedge funds, private equity, and infrastructure. Our clients benefit greatly from having generalists and specialists all in one firm.
- **Our Culture:** Our organization fosters a culture that: (1) challenges conventional thinking, (2) produces original research and analysis with an orientation toward practicality of advice, (3) synthesizes our best thinking from a diverse set of professionals into a well-reasoned, firmwide perspective on issues, and (4) puts the clients' interests first, without exception.
- **Importance of Fiduciary Services:** As consultants operating in the public domain, we are critically aware of the role and importance of fiduciaries. We accept fiduciary responsibility with respect to the

scope of our services. Recognizing the importance of the role of fiduciaries, we created a dedicated fiduciary services team that assists our clients on fiduciary and governance reviews, policy development, board and committee structures and roles and responsibilities, among other service. We are, and have been for years, at the forefront of developing and promoting best practices in this area.

We understand the pressures and scrutiny public plan sponsors are under and believe our fiduciary expertise and services can provide clients with knowledge that their policies and practices are in line with best practices, allowing clients to focus more on investment-related issues. This is a significant differentiator for AHIC, and we leverage the knowledge and expertise of this team often when consulting with public funds.

- **Operational Due Diligence Specialized Team:** Our dedicated global Operational Due Diligence team includes 20 persons (as of January 1, 2019) provides in-depth due diligence on all Buy rated managers. Our team has diversified experience with a range of competencies including compliance, operations, governance, and counterparty risk. In addition, our experience not only includes conducting operational due diligence reviews for an internal ODD program but also in a consulting environment, which has unique demands given the range of underwriting standards and deadline/workflow requirements for clients.
- **Innovative Tools:** We have devoted significant resources to our analytical capabilities for maintaining capital market assumptions, asset allocation modeling, asset-liability modeling, risk budgeting, style analysis (both returns-based and holdings-based), and spending model analysis. Many of our models are built in-house and can be custom-tailored to suit individual client needs. We review our processes and tools on an ongoing basis to ensure that they are up to date and meeting our and our clients' needs.

Hiring the right type of talent is always a challenge for us, as we expect it is for many other firms. We expect our consultants to be well educated and have relevant past experience. We expect them to strive for continuous improvement. We also expect them to “go above and beyond” for our clients. This often means working long hours and traveling around the country. Not everyone is cut out for consulting. Our continuing challenge is to hire the right people who will have a passion for the work we do for our clients.

While many of our competitors provide some of the services we offer, we believe we are one of only very few firms that has developed the extent and the depth of capabilities to meet a broad spectrum of investment needs for large, sophisticated investors, such as PSERS. Notably we believe, our Fiduciary Services, Operational Due Diligence and extensive manager research coverage provides services that other investment consulting firms do not provide.

We believe our strict ethical standards, approach to client service, deep practitioner experience, and world-class research across both policy issues and manager experience, make us the right consultant to effectively meet PSERS needs now and as they evolve. Our clients will attest to the value we bring at reasonable costs. Additionally, no one will work harder for you than we will. We can promise that without any hesitation.

5. How would you suggest that we measure and evaluate the performance of your firm as an investment consultant?

We define successful investment performance as helping our clients' meet their goals. Each one of our clients has unique goals, and we treat them that way. We continually monitor our success through direct interaction with clients and by using various client satisfaction surveys and independent industry surveys where our clients measure our success against a variety of criteria. We have found that an assessment of the following factors can serve as an efficient model for evaluating a retirement plan consultant:

- Value added/performance of portfolio over appropriate measurement periods

- Soundness of policy
- Access to and thorough insights on asset allocation, investment opportunities, and managers
- General knowledge and insights into issues that corporate plan sponsors encounter
- Quality of research and analysis
- Clarity and usefulness of written and verbal advice
- Knowledge of applicable rules and statutes
- Timeliness of work
- Dependability
- Responsiveness to requests
- Proactive assistance and advice
- Interaction with committee and staff

We routinely measure the success of our service delivery through formal and independent client surveys. We have a formalized client satisfaction assessment surveys program in which clients are personally contacted by an independent third party on a scheduled basis. Clients are asked to provide specific feedback on the quality of our consulting work and their overall relationship with their AHIC consultants. A mechanism is in place to respond effectively to all feedback received. We also participate in the independent industry wide study conducted annually by Greenwich Associates. Unfortunately, a confidentiality agreement with Greenwich Associates precludes sharing the contents of the survey outside our firm.

6. *Describe the process you will use to recommend investment objectives and policies for PSERS. Provide samples of investment objectives and policies you have developed for pension fund clients that demonstrate the types of approaches your firm might recommend to PSERS. Highlight risk management components of the process.*

Best practice in setting investment objectives is to begin with the evaluation of the target asset allocation and risk level in the context of a plan's liabilities. In developing and recommending investment policies, objectives, and guidelines for clients, a critical first step is to work with staff and trustees to ensure a thorough understanding of the context in which the organization is setting policy. By context, we refer to the key factors that are the determinants of policy including: characteristics of the plan's liabilities; participant demographics and characteristics; length of the investment horizon; required levels of liquidity; ability and desire of the organization to bear risk; fiduciary responsibility of those overseeing the funds; expertise and experience of Board and Staff.

Once asset allocation is established we help develop reasonable investment objectives in light of capital market expectations and client resources. We encourage our clients to set investment objectives relative to a policy portfolio, where the goal would be to earn returns in excess of this benchmark, within reasonable risk parameters.

Investment Policy Statement

Assisting institutional investors develop investment strategy and clearly documenting such strategy through an Investment Policy Statement ("IPS") is a particular strength of AHIC. We believe our many years of experience working with public funds institutional investors has given us a strong perspective on the issues public funds our clients face and the need for a clearly defined policy document to guide the prudent management and governance of a fund's assets.

Once strategy is established, we believe that it is critical to document the strategy approved by fiduciaries to provide clear, unambiguous guidance to all parties responsible for management and oversight of a fund's assets. A good investment policy document should be concise, yet complete in terms of all aspects governing the investment of fund's assets.

The first step in our review process of an IPS is to facilitate a meeting with the Board and/or Investment Committee to discuss the asset-liability profile and risk level of the current investment program. This will assist in determining whether the IPS accurately reflects the investment objectives and risk tolerances of the Board and/or Investment Committee, the financial and actuarial characteristics of the Plan, and whether the roles and responsibilities are clearly understood. Based on the outcome of the meeting, we will then advise the Board and/or Investment Committee regarding whether amendments are needed to address the purpose, objectives, risk tolerance, and roles and responsibilities stated in the IPS.

We also review whether there are monitoring procedures included in the IPS (i.e., whether compliance with the IPS is monitored internally by staff, or externally by the investment consultant or another service provider). Additionally, a review will identify any gaps or disparities between the current IPS and the list of components we view as critical to a high performance IPS.

We believe a comprehensive policy document should address the following elements: purpose and function of the fund's assets and the policy document; clear definition of a fund's investment objectives/goals; identification of all parties associated with the management (investment) and oversight of a fund's assets, including the fiduciary ability to be contrarian of the parties; total fund asset allocation strategy and associated policy benchmarks; implementation standards—asset class benchmarks and guidelines; risk budgeting policies; permissible or ineligible investments; rules governing the usage of derivatives and leverage; shareholder activities (corporate governance, proxy voting), etc.; and performance measurement, compliance, and reporting criteria.

Lastly, our reviews also focus on how often, and by what process, the Board and/or Investment Committee reviews the IPS. Engaging in a periodic review is important to ensure the policy is current and fully applicable to actual investments, current market environment and ensuing plan circumstances. While it is not expected that an IPS will change frequently, it is a living, breathing document that should to be reviewed periodically to ensure it remains appropriate and relevant.

We take a similar approach towards developing policy statements at the asset class level, working with the appropriate staff and/or committees and boards as appropriate.

Please refer to the **Appendix** section for a sample Investment Policy Statement.

7. *Describe the process and resources you will use to recommend asset allocations for PSERS. Discuss the possible circumstances and process whereby you might recommend that an asset allocation should be changed. Provide samples of asset allocation plans you have developed for pension fund clients.*

Our theory and methodology for setting asset allocation centers on integrated asset-liability management. We believe optimal decisions regarding pension plan management are made when they are based on a clear understanding of the assets and liabilities of the plan and how they interact. It is because of this conviction that we have a dedicated team of pension risk specialists comprised of professionals that are dually-credentialed with both actuarial and investment consulting backgrounds, to not only support plan sponsors during an asset-liability study, but also on an ongoing basis so that pension risks can be managed effectively over time. This team has conducted, from 2014-2018, 765 paid studies and 1,378 unpaid studies for prospects. (as of December 31, 2018).

The Investment Policy Services Team (“IPS”) led by Phil Kivarkis, leverages the experience of more than 14 dedicated individuals in the U.S., with backgrounds in investment management and actuarial science (as of September 30, 2018). It conducts rigorous quantitative analysis to support investment policy recommendations. They assist on our capital market assumptions and asset-liability studies, and advise clients on intermediate and long term asset allocation issues. They are responsible for managing risk in general, including: performing asset-liability analyses, designing custom portfolios, and monitoring portfolio positions from an asset-liability and asset allocation perspective. The team also provides top-down, strategic investment advice and researches new investment strategies.

Our asset-liability studies review how a plan’s asset allocation policy can impact the funded status of a plan over the projection period. It is important to recognize that the benefit structure and contribution/funding policy are other relevant factors that determine a plan’s funded status. Initially, we typically develop our asset-liability model using the current (or “baseline”) benefit structure and funding policy. On several occasions, we have utilized our asset-liability model to analyze the impact of various changes in the benefit structure or funding policy to the future funded status of the plan. In this entire process, we take into account the regulatory requirements for the plan and the actuarial methodologies in place. Any possible changes in these factors can also be incorporated in our model. Thus, we can help our clients understand how different levers that affect the plan’s funded status can be adjusted to achieve a fully-funded goal. Further, we are able to customize our model to accommodate any constraints on potential changes, providing our clients with more comfort in understanding the true implications of passed or potential policy decisions on achieving or maintaining fully-funded status.

AHIC’s deep capabilities in analyzing asset allocation are able evaluate different time periods. Our analysis typically covers 15, 20, and 30 year periods. For pension funds, we believe asset allocation decisions should be made with a long term view, consistent with the fact that the assets support liabilities that have a very long time horizon. The long-term strategic asset allocation policy is set through asset-liability studies. We recommend periodic changes to the asset allocation to reflect capital market developments, changes in the underlying liabilities, or changes in the financing of the plan (contributions from employers and employees). An important aspect of our asset-liability approach is the use of forward looking capital market assumptions. Currently, many of our clients, including PSERS, are refreshing their asset-liability studies considering the dramatic impact the markets have had not only on forward looking assumptions, but on their current funded status.

We continuously monitor asset allocation strategies in light of current market conditions. For a formal review of the asset-liability modeling, we suggest a three- to five-year time span depending on client specifics, or more frequently should circumstances dictate (e.g., corporate restructuring, lump sum settlements, market dislocations, etc.).

We also employ our medium term views (“MTV”) to manage the portfolio asset allocation of plans within predetermined rebalancing ranges. Our MTV represent our assessment of the relative attractiveness of major asset classes over one-to-three year time horizons. We believe this is a unique offering among consulting firms. MTVs provide an additional tool for identifying and assessing opportunities over intermediate time periods and a way to potentially benefit from capital markets volatility. MTVs are prepared monthly by our Global Asset Allocation Team. The Global Asset Allocation Team is also responsible for preparing our long-term capital market assumptions, ensuring consistency between our long-term assumptions and near term views.

Clients have successfully used our MTVs to: determine overweights and underweights to asset classes (within policy ranges) as part of rebalancing; to make investments in new asset classes at opportune times; and to plan for future allocations (e.g., set triggers) based on our assessments.

For PSERS, at a minimum, we will review the asset allocation annually to refresh capital market assumptions, review the investment and liquidity risk of the target asset allocation as well as several alternative asset allocations and consider new potential asset classes as appropriate.

Included in the **Appendix** section is a sample Asset-Liability Study, which includes asset allocation and liquidity analysis.

8. Included as Appendix J is the Fund's Asset Allocation Plan as of June 30, 2018. Provide observations, and recommended changes, if any.

As the incumbent investment consultant, AHIC has assisted PSERS in developing the current Asset Allocation Plan. The asset allocation is well diversified among and within the major asset classes that we believe institutions of PSERS' size should consider and is consistent with AHIC's best thinking.

- **Meaningful commitment to alternatives:** PSERS' has an allocation to alternative investments of about 44% (private equity, private real estate absolute return, and risk parity). We believe that private markets and unconstrained mandates offer better odds for investors to generate unique streams of returns (or excess returns) as compared to investments in public markets. We find that, on average, investors do not commit meaningfully to alternatives considering the resources that institutions typically expend in conducting due diligence and managing assets in this space. Small allocations to alternatives generally do not have an impact on investors' returns to the point where we believe that expending resources for small commitments to alternatives is not a worthwhile endeavor. We believe that investors that commit to alternatives should do so with meaningful allocations – both in order for such investments to have an impact and to better rationalize the costs associated with these investments. Our white paper titled “Go Big or Go Home” addresses these issues.
- **Extensive use of passive management:** We favor extensive passive investments across the public markets. Research that we and others have conducted over the years shows that it is extremely challenging for active equity managers to add value on a consistent basis net-of-fees. In a white paper entitled “Conviction in Equity Investing” we find that less than 2% of domestic equity managers have added value net of their fees on a statistically significant basis. It is for this reason that we prefer investors allocate their public market exposure predominantly passively and utilize their active risk budget and fees in areas where we have higher conviction that such active risk and fees will be rewarded—across the alternatives space and strategies that are managed on an unconstrained basis (e.g., hedge funds, absolute return strategies).
- **Meaningful commitment to Real Assets:** PSERS' has a meaningful allocation to Real Assets (24%) and this allocation is broadly diversified across real estate (10%), Infrastructure (2%), commodities (8%), and MLPs (4%). We favor the use of real assets across client portfolios, especially those with inflation-sensitive liabilities.

Some of the unique aspects of the PSERS policy is its use of leverage at the total plan level (Policy allocation of 17%) and its tail risk hedging characteristics through the extensive use of asset classes such as Long Treasuries, TIPS, and Low Volatility Hedge Funds. PSERS' asset allocation seeks to achieve its expected rate of return (EROA) with less risk than many other public plans through its extensive use of diversifying asset classes and risk parity. The policy successfully reduces the expected contribution of risk from equities, thereby reducing the draw down risk of the plan from significant equity market corrections. The policy decision to utilize leverage is somewhat unique to PSERS. This leverage and the higher allocations to illiquid assets such as private equity and private real estate are risks that need to be thoroughly analyzed when reviewing and setting the asset allocation policy. Aon has thoroughly tested the leverage and liquidity risk to the PSERS plan within an asset/liability framework as well as stress tested the policy in several different market scenario analysis in order to confirm the current asset allocation policy.

9. Describe the process you will use to recommend a structured investment program that includes core versus specialty portfolios, active versus passive portfolios, mix of investment management styles, and number of portfolios. Provide a sample structured investment program.

The approach to portfolio construction differs from client to client as we offer customized solutions based on the goals and objectives set by each client. The following chart presents the steps we use to determine and construct portfolios for pension plans.



Prudent implementation of an asset allocation within each asset class is critical to ensuring that the goals of the asset allocation are met. Our focus on portfolio structure is to achieve cost-conscious and risk-controlled implementation within each asset class, such that the asset class performs the role intended for it in the asset allocation. Key tenets that drive our thinking on portfolio structure include:

- Gain exposure to the broad opportunity set across each asset class
 - Eliminate un-intended structural biases
 - Recognize risks associated with structural biases and be comfortable with such risks
- Use of active and passive management
- Use of core versus specialty management
- Pay little for beta—Use active management for alpha; not diversification
- Eliminate style-box approach to portfolio construction—Style boxes are a rigid and artificial construct
- Focus manager selection efforts on skill and not style
 - Hire active managers that can add value regardless of their style and capitalization orientation
 - Allow managers with identifiable skill broad latitude to add value
- Utilize active risk budgeting as a risk control and allocation tool

- Seek to keep fees low—Pay fees only where expected to add value; higher fees alone do not necessarily translate to higher value-added

In determining how to assemble active managers, we recommend a structure review that evaluates the following characteristics of the set of managers and then optimize among those characteristics:

- Tracking error
- Style distribution
- Market capitalization
- Risk exposures
- Active risk drivers
- Holdings overlap with other managers
- Correlation of returns and excess returns to other managers

A common theme inherent in many legacy public plans is exposure to numerous active equity managers with the goal of capturing diversification benefits, along with alpha. AHIC research suggests that these benefits are often overestimated, and that greater efficiency can be achieved via methodically reducing the number of active managers within a program. Potential benefits of streamlining an investment structure may include; a less complicated investment structure, greater allocations to higher conviction managers, fewer resources, lower governance burden, lower fees, and higher alpha.

We use the following multi-step process as a general guide towards evaluating a plan's investment structure:

- Indexation—start with the most efficient parts of the portfolio such as U.S. Large Cap Equity
- Remove duplication—multiple active managers in the same style box e.g., U.S. Large Cap Value
- Reconsider smaller mandates—from a dollar amount and risk contribution perspective
- Broaden mandates—Global equity is the most efficient 'building block'
- Focus on higher conviction strategies—diversification⁷ benefits are greater from higher conviction strategies

While we do not recommend frequent changes to asset allocation or investment structure, we absolutely recommend the ongoing review to ensure the current approach remains appropriate given a client's circumstances (ranging from legislative changes potentially impacting liabilities or investment policies to risk tolerances/preferences) and market conditions. Through ongoing communication with our clients and insights from our Global Asset Allocation team, which closely monitors capital market and economic conditions, AHIC makes structural recommended changes only after thorough review and thoughtful assessment.

As an example of how we may recommend structural changes in light of market conditions, we have developed Medium-Term Views to manage portfolio asset allocation within predetermined rebalancing ranges. AHIC's "Medium-Term Views" address the growing institutional investor need to generate value, control risk, and manage portfolio changes efficiently across a range of market conditions. Using an analytical framework that combines macroeconomic, valuation, growth prospects, and sentiment/technical analyses, our Global Asset Allocation Team constructs, ranks, and communicates market views across asset classes. Our Medium-Term Views guide our opinion on what asset class/strategies will

⁷ Diversification cannot ensure a profit or protect against loss in a declining market. It is a strategy used to help mitigate risk.

underperform due to market changes, legislative/tax changes, or supply/demand issues. We believe that medium term asset allocation can take advantage of the observed inefficiency of markets. Markets tend to move through cycles of pronounced overvaluation and undervaluation. Performance is enhanced by having 'underweight' positions relative to benchmark for those asset classes which have become too popular, overvalued and whose return prospects are poor and 'overweight' positions for asset classes which have become neglected and undervalued.

Such views are reflected in our recommendations when natural opportunities arise. For example, relatively speaking, we currently have a more favorable outlook for non-U.S. equities as compared to U.S. equities. If an instance were to arise where money was to be allocated to equities, we would advise allocating to non-U.S. equities over U.S. equities. Importantly, our Medium-Term Views are designed to complement long-term strategic allocation policies and we emphasize the importance of utilizing these views within the rebalancing and asset allocation guidelines set forth in the investment policy statement.

Due to RFP requirements on Excel submittal format, please refer to the **separate attachment** for PSERS Investment Structure Review Project Timeline.

10. A sizeable portion of the Fund is invested internally by PSERS' Investment Professionals. How will you evaluate the expertise, performance, and consistency of investment approach employed by PSERS' Investment Professionals?

AHIC has significant experience working with clients that manage assets internally. We have routinely advised these clients across a broad range of issues relating to their internally managed portfolios, including staffing and resources. Examples of the work we've conducted include:

- Provided assessment on each internal investment portfolio at a fund (based on individual interviews with each investor). The assessment included an analysis of the number of resources, the appropriate division of labor between front and back office and adequacy of portfolio procedures, etc. Staff resources were benchmarked versus other internally managed staff resources as well as the type of staff we typically see for externally managed portfolios. This analysis was used to develop a hiring plan for increased bench strength and a needs assessment of gaps within the staffing model. This was used to develop an optimal structure of the investment organization.
- Provided recommendations on optimal structuring of an investment organization to most efficiently and effectively utilize internal and external resources.
- Reviewed each internal management team of a fund in order to allow the Board to determine effectiveness of an internal team. This included comparing internal teams with best-in-class external teams for each of the strategies managed internally.

In conducting our assessment of internal teams, we involve members of our Global Investment Management team, which is comprised of more than 150⁸ full-time global research professionals covering traditional, emerging, and alternative strategies, including operational due diligence (as of September 30, 2018), many of whom have practitioner experience. These teams assess internal management teams – including the soundness of investment philosophy, robustness in implementation of strategy, skill and adequacy of resources (technology and people), incentive compensation arrangements, and operational aspects—similar to how we assess an external investment management organization. Our team conducted 3,015 manager meetings in 2017 and has wide coverage of investment

⁸ Total combined research staff as of 9/30/2018 includes 49 GIC Manager Research Staff (AHIC and Aon affiliates manager research colleagues), 21 operational due diligence colleagues (offshore + onshore), 72 Townsend colleagues from advisory, portfolio management and strategy teams (includes all Legacy Aon RE staff, plus 2 Legacy PE Staff), and 12 Legacy PE staff. Offshore, Innovation, and Support staff represent additional colleagues. Some team members have cross team responsibilities or reporting lines outside the manager research function, includes AHIC and its global Aon affiliates.

strategies across the asset classes, including knowledge of and experience of internally managed investment teams. This insight helps our teams develop a robust, objective assessment of internal teams. In addition, we involve members of our dedicated Operational Due Diligence team conduct a review of investment operations to ensure appropriate risk and compliance controls. As part of our assessment, we would identify and report on potential gaps in resources and/or staff.

Aon has begun the process of conducting the assessment of internal staff. We have updated our DDQs and are working with PSERS staff to get these DDQs completed. Just as with our assessment of external asset managers, these DDQs provide a baseline of information our research staff utilizes when conducting their on-site interviews. Given the work already in process, Aon is prepared to conduct the necessary on-site interviews as soon as we can schedule the interviews. In addition to evaluating the current PSERS investment staff, Aon suggests that in addition it may be beneficial to include an assessment of the current SERS investment staff capabilities in our analysis given the efforts in the legislature to combine the investment resources of PSERS and SERS in response to the recommendations of the Pennsylvania Public Pension Management and Asset Review Commission.

11. Describe how you will review the adequacy of PSERS' Investment Professionals and resources available to administer PSERS' investment program and invest the Fund's and/or the Trust's assets. Include in your description how you will assess the appropriateness of PSERS' Investment Professionals Staff size and expertise, and the technological tools available to PSERS' Professional Staff.

Please refer to our response to question 10 above.

12. How will you evaluate investment expenses incurred? Describe the evaluation framework in detail. What sources of industry/peer data will you employ?

Client fees are reported to AHIC by the investment manager and are taken directly from the client capital account statements. Fees are monitored as part of the quarterly process and any significant changes are noted and investigated further. We utilize industry analysis such as CEM Benchmarking, Greenwich Associates Benchmarking data and our extensive manager research database of investment manager fees for comparison data.

13. Describe your process, and the variables included, in preparing a written Asset/Liability Study. Provide a sample Asset/Liability Study you would submit to the Board.

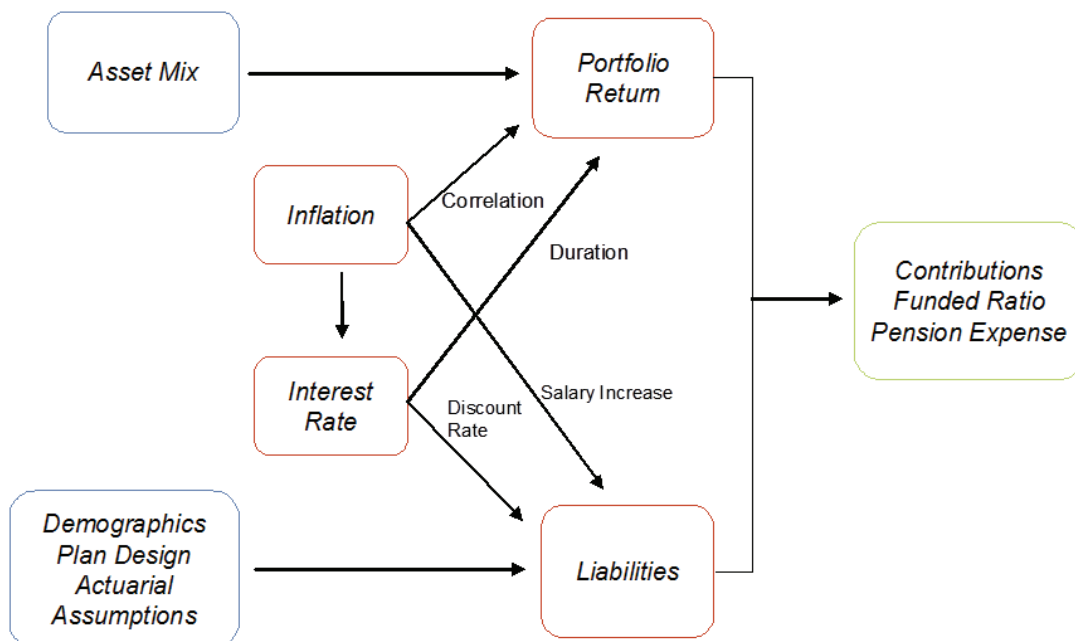
The asset-liability process typically involves a planning phase, a study phase, and a results presentation phase. In the planning phase, we consider the financial goals and objectives, portfolio constraints, liability profile, and assumptions for use in the study. This is also the time we coordinate with the plan actuary to collect the liability profile, and discuss any actuarial items as needed—we have several actuaries on staff that “speak the language.” The study phase involves the actual projection analysis, where we evaluate risk/reward tradeoffs of a variety of strategies if so desired. Finally, we will present these results to various decision-making bodies, so that they can make an informed decision regarding their investment policy.

Our proprietary asset-liability model is used to generate up to 5,000 economic scenarios over the next thirty years using a Monte Carlo simulation process. Key variables we will simulate include:

- Inflation;
- Interest rates;
- Pay increases; and

- Asset class returns.

The graphic below shows how pension assets and liabilities are impacted by common factors such as inflation and interest rates. It also depicts the flow chart for asset-liability modeling used for the projections that follow:



These simulations lead to a projection of assets and liabilities under all economic scenarios for the various portfolios, and allow us to show the expected risk-return tradeoff in terms of:

- Investment return;
- Cash contributions;
- Funded status;
- Liquidity profile; and
- "Economic Cost."

Key outputs of the model follow:

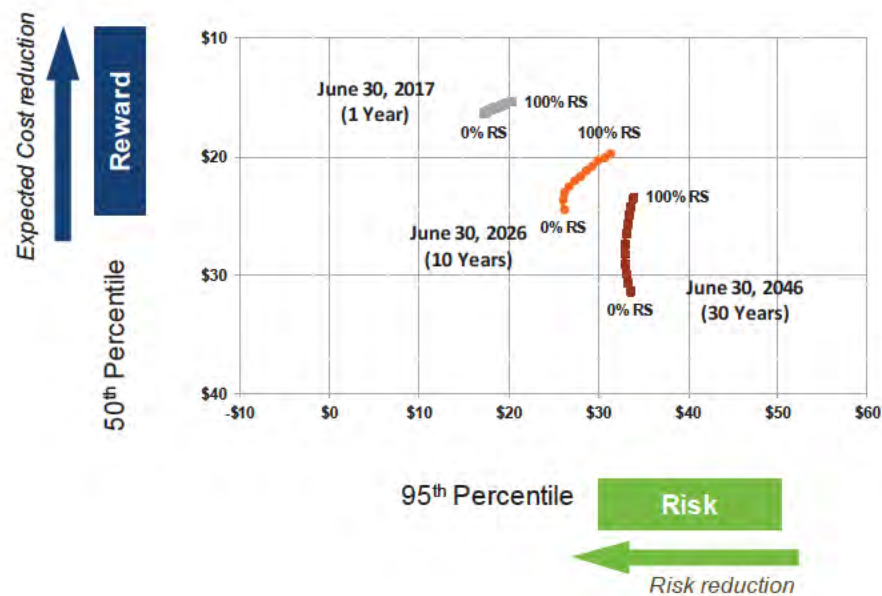


Strategy	40% Return-Seeking			60% Return-Seeking			80% Return-Seeking			Current Policy - 83% R-S			100% Return-Seeking		
Year	2026	2036	2046	2026	2036	2046	2026	2036	2046	2026	2036	2046	2026	2036	2046
5th Percentile	30%	33%	57%	28%	32%	53%	25%	29%	48%	24%	29%	47%	21%	27%	42%
25th Percentile	38%	44%	71%	38%	46%	72%	38%	46%	72%	39%	46%	72%	38%	46%	72%
50th Percentile	48%	54%	88%	40%	50%	94%	53%	66%	99%	53%	66%	100%	56%	71%	106%
75th Percentile	54%	70%	119%	62%	82%	133%	72%	96%	156%	73%	99%	159%	81%	114%	189%
95th Percentile	67%	126%	309%	85%	153%	393%	105%	201%	526%	109%	207%	548%	131%	268%	711%
Probability > 100%	<5%	14%	40%	<5%	20%	46%	8%	24%	50%	10%	25%	50%	17%	33%	54%

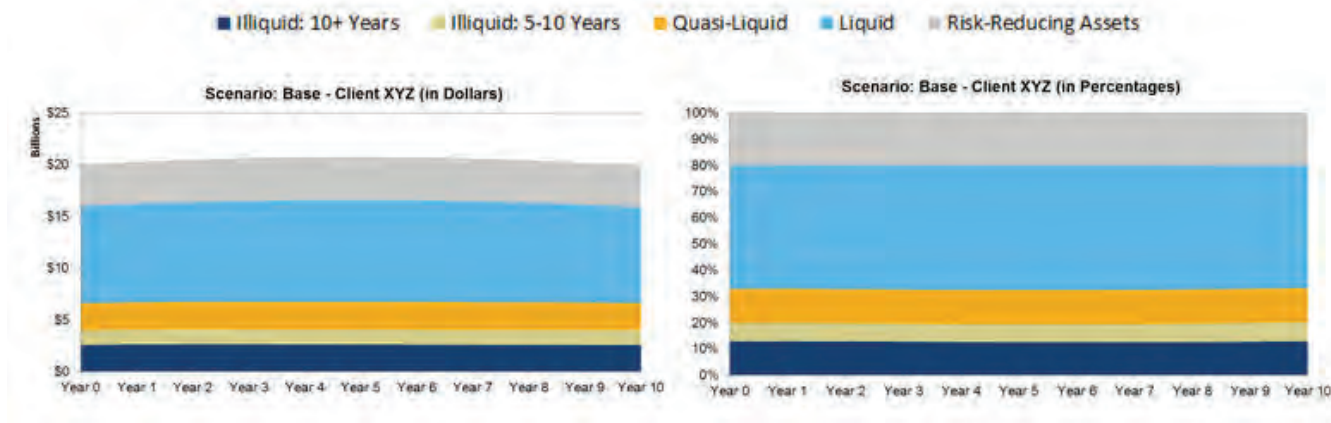
Information presented is for illustrative purposes only and should not be considered investment advice. None of the information presented above has been calculated using the recipient's portfolio information.

Economic Cost

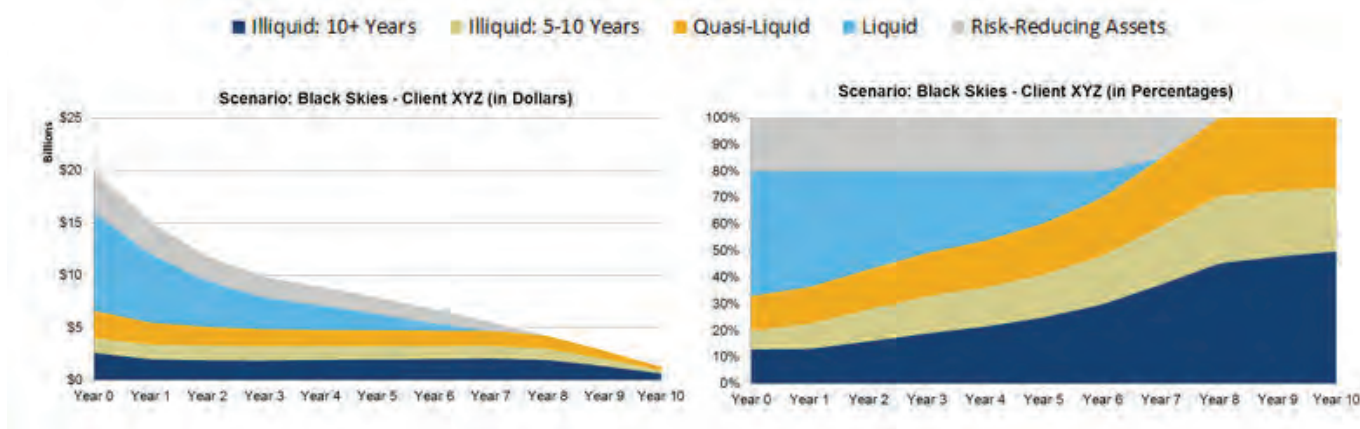
Present Value of Contributions plus AL Funding Shortfall/(Surplus)* at 7.50%, \$billions



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Instead of focusing on individual variables that provide only a partial view of the expected risk-return tradeoffs, we include a metric called “Economic Cost.” This metric combines cash contributions and funded status changes in a single variable, and it can be the most informative variable for making asset allocation decisions. Also, it is important for our clients to know the expected risk-return tradeoffs for each portfolio in scenarios ranging from very optimistic to very pessimistic. We believe AHIC's asset simulation model is a great tool for such risk assessment.

Our analysis will assist in defining an asset allocation policy that attempts to:

- Meets the stated goals;
- Is consistent with its risk tolerance;
- Is likely to meet liabilities effectively in the long run; and
- Allows the client to manage its pension costs to the best extent possible.

We are continuously evaluating and upgrading our approach to make sure it reflects our best thinking, client needs, and changes in financial market conditions and available investment products.

Included in the **Appendix** is a sample Asset-Liability Study.

14. Describe what you will include in the analysis of PSERS' results with the Annual Investment Plan.

All of our work and our reports are highly customized to each of our clients' needs. The annual reviews for each client are customized to include the types of analysis and information that they would like to see and is appropriate given their investment programs. The information provided in annual reviews would also change from year-to-year depending on the changes in the economic and market environment, and the evolving risks that institutional investors face. We would work with PSERS' Board and Staff to identify elements that they would like to see in the annual review, as well as provide our suggestions on important topics that we believe are relevant. That said, at a minimum, we would typically include the following information:

- Overview of economic and capital market environment
- Outlook for capital markets and our medium term views
- Comparison of PSERS' asset allocation to peer public funds
- Discussion on trends in asset allocation among public funds
- Modeling the expected returns and risk profile of PSERS' portfolio based on our most recent capital market expectations
- Detailed review of portfolio performance, including attribution at the total fund and the underlying asset class level
- Progress against established work plans
- Discussion on whether any changes are warranted to PSERS' IPS

15. Describe the variables and methodology you will consider in recommending performance benchmark(s) for PSERS. Provide samples of benchmarks you have recently recommended for current pension fund clients. If risk benchmarks are different than performance benchmarks, describe the differences and provide the same information as performance benchmarks (i.e. variables, methodology and sample benchmarks).

We believe the most critical decision that drives a fund's success is the asset allocation decision and the policy benchmark embodies the asset allocation decision. Comparison of fund returns to the policy benchmark is the best policy-neutral tool to evaluate decisions regarding active managers, program structure, and rebalancing among asset classes.

From time-to-time, we also compare performance of funds compared to peer universes. Each fund's asset allocation is unique to its circumstances, and hence it is critical that peer analysis be viewed in the right context. Peer analysis is useful in understanding how other funds invest their assets (the asset allocation decision), understand differences between a fund's and a peer groups asset allocation decision, which ultimately helps re-affirm the asset allocation decision for a fund.

Key to appropriate and useful peer comparison begins with identifying the appropriate peer universe. In order to garner useful takeaways from peer comparisons, the universe must appropriately reflect similar characteristics to a strategy, asset class, Total Fund, etc. in which it is being compared. We use peer universe information as a supplemental tool and/or data point and not as a primary source for making decisions. At the manager level, peer data can be useful to inform investors whether relative performance of a particular strategy is reasonable relative to a group of similar mandates. Fee information is also another useful peer comparison informing investors if fees paid are in line with industry standards. Some

important universe characteristics to consider when evaluating investment strategies include number of constituents, assets under management, mandate style, and vehicle considerations.

Regarding higher level peer comparisons, such as for asset classes and Total Funds, appropriate peer groups become even more important. There are multiple factors that may influence the performance comparisons with peers, such as active/passive allocations, style biases, levels of assets under management, and investment objectives, to name a few. While we believe that peer data can provide information on what others in the industry are doing and can provide some relevant information on how one stacks up to that group, the advice we provide our clients is always first and foremost based on the needs and resources specific to the organizations' circumstances.

In order to provide a fair comparison across the three peer universe providers mentioned above, we would need to complete a more detailed investigation into their specific construction methodologies. Some of the items we would consider include, but are not limited to: data gathering processes, categorization methodologies, handling of partial or vague information, and reach in terms of coverage across the universe being discussed.

That said, we believe TUCS, CEM and BNY Mellon are all institutional quality peer universe providers. They each tend to have a different focus and so can be supplemental to each other when utilizing all three. They each have the advantage of providing a broad universe as well as being able to be narrowed to more size appropriate peer groups which make comparisons more apples-to-apples. Some common challenges of these peer group providers include the lack of transparency into how certain asset classes are defined, primarily related to alternative asset classes (though non-U.S. and global equity definitions can also be opaque), and the lack of transparency into the included peer constituents.

As a global firm, with significant resources, we have access to a wide variety of subscription-based private market data sources. Private equity benchmark data providers have been a recent "hot topic" for many clients. Benchmark provider Thomson exited the business of providing universe data for private market investments and as such, many clients (as well as our firm) needed to select a replacement.

A single data set that includes performance for all funds in the private equity market does not currently exist because these investments are by definition private. It was therefore necessary to determine a vendor whose data best represents the performance of the market. After the withdrawal of the legacy Thomson Reuters VentureXpert product from the market in 2014, Cambridge Associates and Burgiss Group are the most widely-used vendors that meet this criterion. In comparing the leading vendors we considered data collection methodology, universe size and return results. Ultimately, we selected Burgiss as our private market benchmark/universe provider though we believe both to be of high quality.

The challenge with private markets data vendors is no single data set contains the full private markets universe. We believe Burgiss (broad private markets) and NCREIF (real assets) are reasonable representations of their respective universes. By comparing portfolio performance to a peer universe an investor gains two primary insights: (a) an understanding of whether the portfolio manager selected strong performing funds relative to the opportunity set, and (b) an understanding of how well each fund is performing relative to its peers.

16. Describe how you will identify and evaluate new investment opportunities to recommend to PSERS. Provide samples of reports that would be made available to PSERS which detail the results of your firm's analysis.

We believe it is our responsibility to bring forth new investment ideas to our clients for consideration. New investment ideas that we have introduced to our clients recently include global equity investing,

increasing non-U.S. equity exposure, infrastructure investment, managed beta or risk parity, credit and dislocation opportunities such as TALF and PPIP and a credit opportunities strategy we introduced to clients.

Two of our dedicated research teams—Global Manager Research and Investment Policy Research – are responsible for developing and evaluating new investment ideas for clients. Moreover, our client teams, in working with clients on a day-to-day basis, also customize and develop advice that specifically addresses our different client types' unique circumstances, such as public pension plans, endowment and foundations, defined contribution plans and corporate defined benefit plans.

17. Discuss your willingness to provide PSERS with information on high conviction new managers at the earliest possible juncture to permit PSERS to secure capacity and negotiate terms with promising emergent managers.

Yes, AHIC will provide PSERS with our assessment of new managers that PSERS requested, as soon as it is available from our Operational Due Diligence team.

18. Discuss your willingness to provide opportunities and expense reimbursement for PSERS to jointly meet and evaluate new managers at industry conferences.

AHIC will provide expense reimbursement for PSERS to jointly meet investment manager and attend AHIC client conferences as required by the PSERS contract up to the limit of \$25,000 per annum.

19. Discuss your willingness to provide advance notice to PSERS of in-person meetings with investment managers in PSERS' portfolio.

AHIC will provide advance notice to PSERS of in-person meetings it holds with investment managers in the PSERS' portfolio.

20. Describe your overall approach to manager research and selection, including a list of any specific criteria that must be met in order for a manager to be considered and any characteristics that will automatically exclude a manager from consideration. Please provide an outline of your manager evaluation framework and sample reports.

Our Global Investment Management (GIM) Team's investment manager rating process focuses on both qualitative and quantitative assessment and consists of two main stages: the Initial Rating and Full Diligence.

Initial Rating with the InForm Process

First, the InForm Process, which utilizes a proprietary model, analyzes available investment manager data and rates each product according to seven factors: business, staff, investment process, investment risk, performance, terms/conditions, and operations. The InForm Process applies a quantitative framework around the fundamental insights we believe indicate investment opportunities may be well positioned to ultimately add value going forward. The proprietary model was fully designed and created in-house by the Aon Center for Innovation and Analytics (ACIA). The ACIA is a \$350 million analytics research center that is responsible for delivering data-driven insights to client teams.

This initial review process allows our research professionals to quickly identify investment products with strong potential of ultimately obtaining a "Buy" rating. Additional qualitative evaluations can refine the candidates for further consideration.

Full Due Diligence and Rating Discussion

The second phase of our research process is a more expanded evaluation of the seven aforementioned factors including an in-depth assessment of operations. Examples of research topics by factor are listed as follows:

- **Business:** Profitability, stability and spread of ownership, client base, remuneration policy.
- **Staff:** Quality, depth of resource, team dynamic, staff turnover.
- **Investment Process:** Competitive advantage, repeatability, skill, implementation.
- **Risk:** Embedded in process, independent verification, mix of measurements.
- **Performance Analysis:** Consistent with stated process, risk adjusted, persistent.
- **Terms and Conditions:** Client Service, fees, ESG, best practices in documentation.
- **Operational Due Diligence:** Operational controls, valuation of assets, independent directors, third-party vendors.

AHIC's active and ongoing monitoring begins once a manager/fund is rated by our GIM Research Team. This process involves tracking performance information, quarterly phone calls and/or meetings, as well as annual meetings. Site visits will typically occur once per year. Questionnaires are used to collect fund level data and portfolio company-level data, as well as several qualitative fields. These responses are used to monitor performance and more importantly track the fund's execution of its investment objectives. Although changing market conditions at times may dictate some revision to a strategy, it is important to monitor a manager's progress regarding their stated investment philosophy and to make sure they are not pursuing opportunities that are outside of their core competencies. Our InForm process described above is also a tool our team uses for ongoing monitoring of the wider universe of investment managers.

If a concern is raised about a fund, we will immediately speak with the fund manager to gain a better understanding of the issue and how it will affect our clients. When concerns are not fully addressed, we increase our level of monitoring and request more frequent updates from the manager. In addition, when possible, we will seek to assist the manager with the issue and look for ways to help rectify the problem. Our research group has open and ongoing communication with our clients' managers where we freely express concerns stemming from our research group, consultant teams and our clients. In some cases, we interview managers jointly with the client and inform managers of our concerns.

Included in the **Appendix** is our InBrief report and Operational Due Diligence Summary Assessment.

21. Describe the process you will use to conduct investment manager searches and to recommend candidates to PSERS. Identify all criteria that might be taken into account in order to complete your recommendations. Include a description of the size of your manager database and experience negotiating performance-based fees.

A summary of the typical process for investment manager search/due diligence is provided in the table below. The typical manager search process takes 4–6 weeks.

Process Step	Description
Determine selection criteria	Lead consultant would work with the staff and the board to determine selection criteria (e.g., investment style, experience, performance, fees, size, risk, stability of staff). We do not have a standard set of criteria for each search. Rather, we consider the unique circumstances of each opportunity and determine which criteria are most important to emphasize.
Identify preliminary candidates	<p>Lead consultants, in coordination with investment manager research colleagues, would then screen our manager database to identify preliminary candidates that meet the selection criteria. If there are any candidates that the client would like us to consider we include them on our list as well.</p> <p>Thanks to our InForm process, we have the ability to efficiently obtain a quantitative scoring of each preliminary candidate.</p>
Update information/ visit managers	<p>We review the information in our databases regarding candidate managers, update the information, and visit the managers, as needed. While we typically have much of the quantitative data we require to screen managers and assign an initial score, we recognize the importance of a qualitative assessment.</p> <p>It is during this step in a search that we introduce our qualitative assessment. This includes meeting face-to-face with portfolio managers, analysts, traders, and executive management. We also conduct operational due diligence (ODD) on-site visits, which are led by our dedicated team of ODD professionals.</p>
Select and profile finalist candidates	<p>Based on the preceding analysis, the lead consultant, in conjunction with investment manager research, would review the candidates and propose finalists to the client.</p> <p>We typically narrow the field of candidates to three or four firms. For the finalist candidates, we provide a rating and a comparative search report.</p>
Discuss finalist candidates/ interview finalists	We discuss the finalist candidates with the client and answer any questions. Additionally, we can help organize presentations by finalist candidates at our client's offices and participate in the interview process.
Select managers	Following the finalist interviews, the client is in a position to select the manager(s) that best fits its investment structure.

InView Database

Our proprietary database, InView, covers over 10,000 investment managers and over 23,000 products. We use eVestment Alliance as our primary screening tool. As information on new strategies is updated in eVestment, it is captured during our quarterly screening, added to our database, and brought to our researchers' attention. The latest search and navigation tools are built into InView, and the home page is customizable, bringing the information most relevant to researchers to the front and center. Managers are not charged for inclusion in our database. The attached table shows the number of managers and products by asset class (as of September 30, 2018).

The table below shows the number of managers and products by asset class in our proprietary system, InView (as of September 30, 2018):

	InView Database as of 9/30/2018	
	Products	Managers
Equities	6,518	1,383
Fixed Income	2,588	646
Hedge Funds	1,388	735
Private Equity	7,026	2,599
Infrastructure	251	144
Real Estate	4,211	1,317
Multi Asset/DGF/TTAA	722	313
Cash	124	56
Currency	83	59
Commodities	51	30
Other	419	200
Unclassified	208	4,792
Total	23,619	10,239*

**Totals will be less than the sum of asset classes as managers will have products in more than one asset class.*

**Includes Buy & Buy (Closed) Ratings*

The model, based on a myriad of factors, scans and assesses the global universe of equity, fixed income, and hedge fund managers. Each quarter, a complete investment product dataset is loaded into the model, which then analyzes data across several key categories and individual factors. This initial rating process, called the InForm process, described in our response to the previous question, III-7.20, helps our research professionals to quickly identify investment products with the potential of ultimately obtaining a “Buy” rating after our extensive due diligence and rating process takes place. Leveraging the InForm process helps us to spend valuable client hours performing in-depth research on candidates that better serve our clients’ needs.

22. Describe your process of reviewing investment manager performance and consistency of investment approach.

We evaluate manager performance over long periods, typically encompassing a market cycle, for purposes of retention, probation, or termination. In instances of manager underperformance, our first step is to gain an understanding of the causes for the underperformance and use our knowledge of the strategy to determine if the underperformance is reasonable in the context of the market environment that has been experienced. A critical component of our manager research is gaining a strong understanding of the investment strategies and how we should expect them to perform in different market environments and under different circumstances. For instance, a strategy that has a systematic bias to certain areas of the opportunity set relative to its benchmark will at times out- and under-perform, as those areas are in and out of favor. We use this knowledge to decipher if the strategy is performing as we would expect it to under the given circumstances and to act accordingly. In instances when underperformance does not align with expectations given our knowledge of the strategy, or we see a change in the manager’s strategy or process, we take a proactive approach to gaining further information.

Our research group has open and ongoing communication with our clients’ managers where we freely express concerns stemming from our research group, consultant teams and our clients. In some cases, we interview managers jointly with the client and inform managers of our concerns.

In addition to performance issues, we have recommended manager changes due to issues such as:

- Organizational structure changes (e.g., acquisition by another organization)
- Deviation from stated investment approach
- Lack of internal controls (leading to dispersion problems across accounts, for example)
- Professional turnover
- Rapid growth in assets that inhibits the manager from effectively implementing its investment style
- Style duplication with other client managers.

In addition, AHIC continues to monitor the appropriateness of the strategic asset allocation, the investment manager line up, and policy/guideline compliance using quantitative and qualitative measures as part of our ongoing retainer relationship. We recommend changes as necessary, however, we suggest that clients formally review each of these important issues as part of a regular review process (typically, we update asset allocation studies every three to five years or more frequently in the event of a material change in a client's risk tolerance or risk preference).

AHIC often incorporates a summary of the client's policy statement into the quarterly performance report so that compliance can be checked during quarterly reviews. In addition, we can produce a compliance checklist each quarter.

23. Describe your process of performing due diligence review and analysis on the professional staff and operations of investment managers. Provide samples of reports that would be made available to PSERS which detail the results of your firm's analysis.

Please see our response to Question 24 which details our operational due diligence process of investment managers. Please refer to the **Appendix** section for a sample InBrief report.

Our investment due diligence process reviews the investment staffing of investment managers. Items like quality of staff, depth of resource, team dynamic, and staff turnover are reviewed. A sample InBrief report is included with this submission to provide an example. All newly buy-rated strategies require a review from our global operational due diligence team, regardless of asset class. The review includes an assessment of the investment manager's operations across eight core categories, as follows:

- Corporate and Organizational Structure
- Trade/Transaction Execution
- Middle/Back Office and Valuation
- Compliance and Audit/Testing
- Investment and Counterparty Risk Oversight
- Technology and BC/DR
- Key Service Providers
- Fund Structure and Administration (when the investment is a pooled vehicle)

Information that informs this assessment is gathered through a combination of sources, which may include but are not limited to the following:

- Written responses from the manager to questionnaires or individual questions;

- Review of supporting documentation provided by Manager;
- Interviews with manager personnel, whether in person or via teleconference;
- Interviews with manager's key service providers, whether in person or via teleconference; and
- Demonstrations of select operational processes.

Our methodology is adaptive to allow for an assessment of a manager's capabilities on both an absolute basis (i.e., as an investment manager regardless of strategy) and a relative basis (i.e., with consideration of market constructs related to the manager's asset class).

Our operational due diligence assessment is written up in a report outlining key findings, and any concerns. We consider these reports proprietary and for client distribution only. However, upon an in person visit we would be happy to share some examples for viewing.

24. Do you have dedicated individuals or teams separately responsible for investment, operational, and legal/compliance due diligence? If so, does each group have authority to "veto" a prospective investment before a recommendation is made to a client or at any time thereafter?

Yes, our dedicated global Operational Due Diligence team includes 20 persons (as of January 1, 2019). Our team has diversified experience with a range of competencies including compliance, operations, governance, and counterparty risk. In addition, our experience includes conducting operational due diligence reviews for an internal ODD program but also in a consulting environment, which has unique demands given the range of underwriting standards and deadline/workflow requirements for clients.

All newly buy-rated strategies require a review from our global operational due diligence team. The review includes an assessment of the investment manager's operations across eight core categories, as follows:

- Corporate and Organizational Structure
- Trade/Transaction Execution
- Middle/Back Office and Valuation
- Compliance and Audit/Testing
- Investment and Counterparty Risk Oversight
- Technology and BC/DR
- Key Service Providers
- Fund Structure and Administration (when the investment is a pooled vehicle)

Information that informs this assessment is gathered through a combination of sources, which may include but are not limited to the following:

- Written responses from the manager to questionnaires or individual questions;
- Review of supporting documentation provided by manager;
- Interviews with manager personnel, whether in person or via teleconference;
- Interviews with manager's key service providers, whether in person or via teleconference; and
- Demonstrations of select operational processes.

We assign each firm an overall rating; firms can receive one of four ratings: "A1 Pass", "A2 Pass", "F", or Conditional Pass ("CP"), as follows:

Rating	Definition
"A1 Pass"	We noted no material operational concerns and considers the firm's operations largely align with a well-controlled operating environment.
"A2 Pass"	The firm's operations largely align with a well-controlled operating environment, with limited exceptions. Managers may be rated within this category due to resource limitations or where isolated areas do not align with best practice.
"CP"	We noted specific operational concerns that the firm has agreed to address in a reasonable timeframe; upon resolution, we will review the firm's rating.
"F"	We noted material operational concerns that introduce the potential for economic or reputational exposure; we recommend that investors do not invest and/or divest current holdings.

Product ratings are discussed and vetted with the entire research team before an official rating is determined. These "official" ratings are shared with our clients in the form of our InBrief, InProfile, and InTotal reports.

Some of the factors we look for in downgrading and recommending replacement include but are not limited to: personnel turnover on the investment team, change of ownership, change of compensation structure, and deviation from mandate (style, capitalization, etc.)

Depending on the specific strategy and investment vehicle that we are reviewing, our ODD program considers well over 100 different control points across an investment managers operating and control environment. Each of these points has its own range of targeted controls. When there are deficiencies, we consider the gap and its impact on a singular basis but also how it may layer or combine with other gaps.

Important factors include the following:

- A material deviation from both best practice and market practice (such as a hedge fund that does not use an external administrator)
- A material deviation from best practice that creates a single point of failure within an organization (such as an individual with multiple roles that limits segregation between investment/operations/control responsibilities)
- Deviations which combine in a manner that increases risk (such as considering cash controls and frequency of cash account reconciliation in the aggregate)
- Deviations which demonstrate lack of aptitude or market awareness (selecting sub-par service providers)

25. Do you perform background checks on the key individuals of all prospective managers? What roles/titles are typically included in this group (i.e. CIO, portfolio managers, CEO, CFO, etc.)? What specific red flags are you looking for? What service provider(s) do you utilize for background checks?

Our operational due diligence process does include background checks for key individuals. In terms of background check subjects, the specific individuals vary from firm to firm, depending largely on the concentration of authority and responsibility within the firm, and most typically for senior level firm

personnel. We consider both significant historical matters related to criminal, regulatory, or civil litigation, or bankruptcy issues as well as pattern behavior which may indicate risk-taking behavior even if individual incidents are not necessarily material on a stand-alone basis.

26. Describe your approach to performing reference checks on prospective managers, including both named and informal references.

Please see our response to the previous question.

27. Do you examine and contact the third-party service providers of all prospective managers? If so, describe the key diligence components and areas of focus with respect to: 1) Administrators, 2) Custodians and Prime Brokers, 3) Auditors, and 4) Legal Advisors.

We conduct interviews with manager's key service providers as part of our due diligence process. We consistently focus on fund administrators as a key third party relationship to verify; in addition, we also collect information on the administrator which may include DDQ responses, interviews, or on-site visits. We take a risk-based approach to additional service provider checks and may independently verify relationships and service levels for custodians/prime brokers, auditors, and legal advisors. We typically conduct more of these reviews for smaller or emerging managers than we do for larger more established firms. In any case we request contact information for each and or diligence level may vary. For example, for emerging hedge fund managers we might conduct an independent asset verification by requesting balance information from prime brokers and custodians but we typically would not do this for an established long-only equity manager (particularly for managed accounts).

28. Please discuss the firm's database of investment managers. How many single-strategy and how many fund of funds managers are in the database? What are some key factors the firm uses to rate managers in the database? Can the database be accessed by clients online?

Our proprietary database, InView, covers over 10,000 investment managers and over 23,000 products. We use eVestment Alliance as our primary screening tool. As information on new strategies is updated in eVestment, it is captured during our quarterly screening, added to our database, and brought to our researchers' attention. The latest search and navigation tools are built into InView, and the home page is customizable, bringing the information most relevant to researchers to the front and center. Managers are not charged for inclusion in our database. The attached table shows the number of managers and products by asset class (as of September 30, 2018).

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	Products	Managers
Currency	83	59
Commodities	51	30
Other	419	200
Unclassified	208	4,792
Total	23,619	10,239*

*Totals will be less than the sum of asset classes as managers will have products in more than one asset class.

*Includes Buy & Buy (Closed) Ratings

Our database includes a very wide number of investment managers and strategies. While we do not track specifically the number of single-strategy and fund-of-fund managers are in the database, both are included.

The model, based on a myriad of factors, scans and assesses the global universe of equity, fixed income, and hedge fund managers. Each quarter, a complete investment product dataset is loaded into the model, which then analyzes data across several key categories and individual factors. This initial rating process, called the InForm process, described in our response to the question in III-7.20, helps our research professionals to quickly identify investment products with the potential of ultimately obtaining a “Buy” rating after our extensive due diligence and rating process takes place. Leveraging the InForm process helps us to spend valuable client hours performing in-depth research on candidates that better serve our clients’ needs.

Some of the most common general evaluation criteria that we analyze are shown below, broken out into relevant categories.

General Criteria

U.S. Equity	International Equity	U.S. Fixed Income	Real Estate
Sector allocation decisions/rationale	Country allocation decisions/rationale	Duration decisions/rationale	Property allocation decisions/rationale
Security selection decisions/rationale	Asset allocation decisions/rationale	Yield curve decisions/rationale	Geographic allocation decisions/rationale
Portfolio deviation from index	Security selection decisions/rationale	Sector allocation decisions/rationale	Financing methods
Portfolio biases due to investment approach	Currency hedging decisions/rationale	Security selection decisions/rationale	Legal structure of fund
Portfolio characteristics	Portfolio deviation from index	Portfolio deviation from benchmark	Portfolio biases due to investment approach
Market capitalization emphasis	Portfolio biases due to investment approach	Portfolio biases due to investment approach	Acquisition decision making
Performance attribution	Portfolio characteristics	Portfolio characteristics	Property management decision making
Cash reserves	Sector allocation decisions/rationale	Cash reserves	Divestiture decision making
	Use of emerging markets	Maturity distribution/emphasis	Portfolio characteristics
	Performance attribution	Use of high-yield bonds	Performance attribution
	Cash reserves	Use of international fixed income	
		Performance attribution	

For illustrative purposes only

Clients can view manager research information on the strategies in which they invest via our InView for Clients database. Through InView for Clients, our clients are able to see how their portfolios are positioned, work with interactive analytics, and view GIM deliverables including ratings, assessments, how those assessments have changed over time, as well as all manager meeting notes.

29. How willing is the firm to perform due diligence on managers that are not in the database but that the Board would like reviewed? Is there an extra charge for that type of research?

We reach out to managers, attend industry conferences and events, and employ our robust network of contacts to source new investment manager ideas. As we have a significant number of clients and assets under advisement, we are also frequently sought out by investment managers (either newly formed entities or existing managers with new products). We maintain an “open door” policy for all managers, regardless of firm size, tenure, track record, or strategy. We believe that this policy keeps our firm apprised of all available opportunities while also providing critical access for all fund managers. AHIC has and will conduct due diligence on managers that are not currently in the database at the request of the PSERS Board. There is no extra charge for this research.

30. Each year, on average, how many managers do you: 1) Meet with, 2) Subject to full due diligence, 3) Update prior full due diligence, and 4) Approve for investment?

Our research professionals meet with our buy-rated managers at least once in every 12 to 18 months, typically on-site at their office. We generally meet these managers several times a year at our offices and/or via conference calls as necessary, but at a minimum on a quarterly basis. We also meet with additional managers that are not on our buy list to keep apprised of the industry, as well as to identify strategies that might be candidates for a buy-rating. In 2017, our research team conducted 3,015 manager meetings. We typically do full due diligence on 200 strategies a year.

A significant percentage of strategies that go through our full due diligence are approved for investment, as if we see any red flags in the strategy or approach, we will not progress them through the full due diligence process. An operational due diligence fail will prevent the strategy from receiving a buy rating.

31. Do you host any client events or conferences? If so, please describe them. Are managers invited to attend?

Our U.S. investment consulting division hosts a client conference every 24 months covering a variety of retirement and investment topics. Our most recent conference was held in Chicago on May 17–18, 2017. The program consisted of a number of break-out sessions that allowed plan sponsors to engage with their peers as well as gain education. Consistent with our policy of not accepting any revenues from managers, Aon Hewitt fully pays for this conference. Attendance is exclusive to our clients and no asset managers attend. AHIC will be hosting our next Client Conference on September 25-26, 2019 in Chicago.

32. Discuss your willingness to establish a knowledge transfer relationship with PSERS and describe the activities and information that this would entail including data sharing and analytics.

One of our primary functions is to educate and inform clients on the full spectrum of topics applicable to them in their role with the investment program. We offer multiple communication channels for clients to receive our research and to keep them apprised of changes in the regulatory environment and the investment landscape, as well as to keep clients abreast of new opportunities and trends. Following are details of our educational and training resources, all of which are provided at no charge. **Please note that all of the individuals proposed to work on the team supporting PSERS have experience participating in, contributing to, and bringing these education venues to clients.**

- **Aon Retirement and Investment Blog:** In 2014, we launched <https://retirementandinvestmentblog.aon.com/>, which now boasts over 2,672 subscribers globally as of 12/31/2018. Researchers and consultants typically publish two to three posts a week on various topics, including research, market events, legislative changes, and more.
- **Client Conference:** Our U.S. investment consulting division hosts a client conference every 24 months covering a variety of retirement and investment topics. Our most recent conference was held in Chicago on May 17–18, 2017. The program consisted of a number of break-out sessions that allowed plan sponsors to engage with their peers as well as gain education. In 2019, AHIC will be hosting Client Conference in Chicago on September 25-26th.
- **Webcasts.** From time to time, Aon hosts educational webcasts on key issues impacting clients. These will vary in topic but are open to all clients who have interest.
- **Medium-Term Views.** Traditionally, much attention has been paid to short-term (tactical) and long-term (strategic) issues, leaving the medium-term (12-36 months) opportunities largely unexploited at times. These views are issued monthly and provide plan sponsors an opportunity to capitalize on market dislocations by complementing strategic allocations with targeted opportunities for return enhancement or risk mitigation.
- **Quarterly Investment Outlook Publication.** This quarterly publication produced by our Global Investment Consulting Practice addresses the near term risks and opportunities each quarter.
- **Fiduciary Training.** Understanding fiduciary responsibility is of utmost importance to anyone who is a fiduciary of a retirement plan (defined benefit or defined contribution) or other type of trust. The fiduciary standard is the highest standard imposed by law. We believe that training on fiduciary responsibility should be a regular occurrence for a board of trustees.
- **Chief Investment Officer Newsletter.** This quarterly newsletter covers the market environment and our positioning. Our first Retirement Newsletter (“Pathways”), which focuses on investment issues for retirement plans, was released in March 2018.
- **White Papers.** The research team publishes a series of white papers, which address a variety of topics and cover the broad interests of the firm’s diverse client base. Recent papers, including papers applicable to asset management, asset allocation, or benchmarking.

33. Describe the access and interaction PSERS would have with members of your staff, other than the assigned consultant and backup.

Consulting services will be delivered to PSERS by five experienced investment consultants, Claire Shaughnessy, Kevin Vandolder, Amanda Janusz, Darren Moran and Jeanna Cullins. It is expected that one of the two lead consultants will attend the regular meetings, as well as any necessary “off-cycle” meetings/calls with the Committee and staff. As scheduling changes are inevitable given the demands on members of the Committee, at least one member of the consulting team will attend every meeting in person. In addition to the lead consultants, the secondary consultants (Amanda and Darren) will be assigned to the relationship. These individuals are responsible for managing the day to day coordination between AHIC and the PSERS staff, as well as the interaction with the other vendors to the plans, such as custodians, recordkeepers and investment managers. Claire, Kevin, Amanda and Darren will be the primary day-to-day points of contact for PSERS.

AHIC will bring the full capabilities of the organization, which are described throughout this RFP response, to the PSERS relationship. This includes our investment policy services, global investment management, and global asset allocation teams. Members of these teams will attend Board meetings and calls with PSERS often depending on the topic. For example, Phil Kivarkis is an active participant in the annual asset/liability reviews and attends the Board meeting to review the Asset allocation meeting. AHIC’s GIM and Operational Due Diligence staff is always available to PSERS staff for conference calls regarding investment managers and asset class specific discussions.

34. Briefly summarize your philosophy regarding the consultant's relationships with boards, internal investment professionals, and investment managers.

For four decades, we have worked with public retirement systems. Our philosophy is to live up to the terms of our agreement and never forget we serve in a fiduciary capacity.

We see ourselves as a trusted advisor to the fiduciaries on the board and investment staff. With regard to the board, we will partner to provide a view of best practices in various areas, including reporting, benchmarking, asset allocation, investment structure, and investment policy. Our primary goal will be to assist the board in making decisions that are in the best interests of plan participants and whose main purpose is to achieve the investment objectives set forth in policy. We will report performance and other performance-related metrics objectively at regularly scheduled board meetings as well as other topics that require our input and analysis. We will also make available our firm's research to board members both topical and manager-related.

With respect to the investment staff, we will work collaboratively and act as a resource for any issues that may come up related to the investment program. We work with investment staffs in many different capacities and customize our working relationship based on the different circumstances of each client. For example, some investment staffs rely heavily on our manager due-diligence efforts, outsource to us most steps in the search process, and ask us to provide written documentation of our due-diligence efforts; other clients simply rely on us as an advisor to augment and provide a broad industry view on issues related to manager search projects. The lead consultants are always accessible to the investment staff, but some clients also prefer to contact our specialists directly, and we are comfortable with this arrangement. We encourage our clients to build other relationships around the firm outside of the lead consulting team.

Our role with regard to investment managers is to be an independent evaluator of their capabilities, fees, and services, and communicate these views to PSERS.

35. List all standard services provided in a typical pension plan consulting assignment. List the specialized services that you have provided to meet other needs of your clients.

Our knowledge of the retirement arena is extensive. We are a full-service investment consulting firm that provides independent and objective advice with extensive global resources and proprietary trends data. AHIC provides the following investment consulting services depending on the client's specifications:

- | | |
|--|--|
| ▪ Investment Policy | ▪ Asset-Liability Studies |
| ▪ Investment Structure | ▪ Strategic Planning |
| ▪ Investment Program Evaluation | ▪ Client and Fiduciary Education |
| ▪ Performance Calculation | ▪ Proxy Voting and Shareholder Activities |
| ▪ Cost and Transition Management | ▪ Program Oversight |
| ▪ Manager Selection | ▪ Private Equity Advisory Services* |
| ▪ Manager Monitoring | ▪ Real Estate Advisory Services* |
| ▪ Master Trustee/Custodian Selection and Oversight | ▪ Hedge Fund Managed Account Services* |
| ▪ Board/Committee Governance | ▪ Opportunistic Strategies Advisory Services |
| ▪ Fiduciary Audits and Operational Reviews | ▪ Expert Witness Testimony |
| ▪ Subadvisory | ▪ Delegated Services* |
| | ▪ Operational Due Diligence |

The services marked with an asterisk are services not typically provided in our standard non-discretionary general consulting relationship but are services we do provide to other clients based on their needs.

B. Performance Measurement, Risk, and Attribution Reporting

- 1. Describe the content, format, and method of delivery of the quarterly performance reports you will prepare for PSERS. Performance reports are deemed to be inclusive of ex-post risk reporting and analysis. Describe instances where performance and risk indices and benchmarks are different. Include:**

Our quarterly performance reports great detail on our clients' investment programs. The report includes an overview of the major capital markets, an executive summary with a high-level overview of the total plan and a detailed body including sections on each asset class and multiple pages on each investment manager. Our reports contain key information in easy to read exhibits that will be meaningful to laypersons and investment professionals alike.

Quarterly performance reports with our full analysis are normally available 45–50 days after the quarter's end, depending on data availability. The report includes an Executive Summary for a high-level overview of the plan, as well as a more detailed body that includes asset detail, investment manager performance, risk statistics, and a variety of other customizable items. The investment consulting team will review the report in conjunction with clients at regularly scheduled meetings. We can deliver the report in both hard copy and electronic copy formats to maximize flexibility for clients.

We are able to tailor our performance reports to meet the specific needs of PSERS by removing from, adding to or modifying to our standard reports. Below we have listed the contents of our standard quarterly performance report:

Executive Summary

- Capital market overview
- Total fund performance relative to policy and other designated benchmarks
- Performance compared to appropriate peer plans
- Asset allocation relative policy
- Total fund risk statistics
- Attribution analysis (graphical representation of plan performance drivers), including:
 - Asset allocation effect: Impact of allocation differences relative to policy
 - Selection effect: Impact of asset class performance relative to asset class specific benchmark
 - Other: Impact of intra-month cash flows

Asset Class and Investment Manager Performance and Portfolio Statistics

- Asset class level review, including:
 - Manager allocation
 - Performance compared to appropriate benchmarks
 - Performance compared to appropriate peer universe
 - Risk vs. return analysis
- Investment manager detail pages, including

- Performance compared to appropriate benchmarks and peer groups
- Portfolio risk statistics

Detailed Capital Market Environment

- Broad asset class performance results (displayed graphically) including major traditional and alternative asset classes and underlying sub-asset class performance and details.

AHIC has established a formal performance reporting manual for the PSERS relationship, which documents our methodologies for performance calculation, sourcing of data for different segments of the portfolio, reconciliation processes in place (with investment managers, custodian, specialty consultants, and PSERS staff), and outlines acceptable tolerance ranges for variance of returns vs. manager reported returns (typically 15bps, with some exceptions, such as currency hedging portfolios, which are 5bps).

- Data and method used to calculate total return before and after fees. Please identify which criteria in your methodology can be customized by client preference. PSERS, PSERS' custodian bank, investment managers, and/or fund administrators will supply a monthly portfolio asset list with accrual market values for marketable securities. PSERS' will supply quarterly portfolio market values and cash flow data for real estate, venture capital, and private equity investments.***

Please indicate whether you use your own pricing sources and describe how you will investigate/resolve pricing errors in the custodian bank's asset list. Describe how you handle pricing for derivative investments. Identify your pricing sources and hierarchy by asset class.

We do not use our own pricing sources for any type of security. We use custodial statements for portfolio's market values, prices, and transactions. If our return differs from that of the investment manager because of a pricing difference, we notify the investment manager of the potential custodial error and request that they resolve the issue with the custodian. We maintain contact with the investment manager on the issue until it has been confirmed as resolved.

Our performance measurement system is flexible and gathers data from the source directed by the client (including from managers, custodian or client) and provides multiple verification checks. The system also has the ability to export into Excel which further enhances our ability to verify and reconcile manager returns.

Manager returns are compared against calculated returns over the relevant period (month/quarter). Returns are calculated as described above using actual cash flows (contributions and distributions) during the reporting period, along with beginning and ending market values. Cash flow data and beginning/ending market values are usually obtained from both the custodian (if applicable) and each relevant manager, and any discrepancies found in the data between the two sources is investigated to determine the cause (i.e., inclusion/exclusion of cash flows occurring near quarter-end, difference in accounting for impact of cash flows on market value, etc.). Once data has been reconciled, time-weighted returns are calculated as described above and are compared against the corresponding manager-reported returns. Any discrepancies are investigated in much the same way as described for cash flow and market value discrepancies, where the manager is contacted in an effort to determine the source. If it is found that the manager uses a different methodology for calculating returns that accounts for discrepancies in reported returns, their methodology is noted and verified. If the discrepancy emerged from another source (cash flow(s), valuation difference, etc.), it

must be uncovered and worked out with the manager in order to determine the proper performance figures for the period.

In computing individual manager returns, we need cash flows and Net Asset Values at Fair Value aggregated at the individual manager level. Cash flows would need to be segregated at least between the following four categories: Contributions, Income Distributions, Gain Distributions, and Return of Capital Distributions. In terms of types of returns, we can provide both dollar and time weighted returns.

AHIC uses the Modified Dietz methodology to estimate time-weighted returns for investments that have periodic cash flows but are not valued daily. The total return (R_t) for each period (generally one quarter) is calculated as:

$$R_t = \left(\frac{(NAV_1 - NAV_0 - CF)}{NAV_0 + WCF} \right)$$

Where:

NAV_1 = Ending net asset value

NAV_0 = Beginning net asset value

CF = Net contributions in the period (net distributions are added)

WCF = Total weighted net contributions in the period (net distributions are subtracted)

The weighted contributions/distributions are determined based on the date in the period in which each cash flow occurs. Cash flows that occur earlier in the period receive a greater weight than those that occur later in the period and thus have a greater impact on the period return. For each cash flow, the weighted cash flow is calculated as:

$$WCF = \frac{D-d}{D} * CF$$

Where:

D = Number of days in the period

d = Day in the period on which the cash flow occurs

CF = Cash flow

The returns for each period are then linked geometrically to determine the return over the entire time horizon using the following equation:

$$R = [(1 + R_1) * (1 + R_2) * (1 + R_3) * \dots * (1 + R_N)] - 1$$

where N is the number of periods in the horizon. For time horizons over one year, the return is annualized as follows:

$$R_{annualized} = \left((1 + R)^{\left(\frac{1}{Y}\right)} \right) - 1$$

where Y is the number of years in the time horizon.

b. Time periods for which total returns can be calculated.

All returns are calculated on a monthly basis provided custodial data is available. As long as we have monthly total rates of return loaded into our performance measurement system, we can calculate and display total rates of return for any time period as long as the end date is the last day of a month.

c. Standard indices, custom indices, and benchmarks you will use for comparison.

Our performance measurement system has a vast selection of standard market indices from which to choose. Custom index blends or splices can be created within the system as long as the data for the individual indices are available.

d. Total population of funds and public pension funds (including a large fund subset) you will use for universe comparisons.

Below are the public plan universes available within our performance measurement system (as of December 31, 2018).

Peer Group Name	Peer Group ID
▶ All Public Plans-US Equity Segment	395
All Public Plans-US Fixed Income Segment	396
All Public Plans-Intl. Equity Segment	399
All Public Plans-Intl. Fixed Income Segment	400
All Public Plans-Real Estate Segment	401
All Public Plans-Total Fund	402
All Public Plans > \$1B-US Equity Segment	387
All Public Plans > \$1B-US Fixed Income Segment	388
All Public Plans > \$1B-Intl. Equity Segment	390
All Public Plans > \$1B-Intl. Fixed Income Segment	391
All Public Plans > \$1B-Real Estate Segment	392
All Public Plans > \$1B-Total Fund	393
All Public Plans < \$1B-Total Fund	398

e. Characteristics you will compare.

Our system can run numerous risk/return stats, including standard deviation, tracking error, information ratio, downside risk, correlation, beta, up/down market capture, Sharpe ratio, etc. We also can run holdings-based portfolio characteristics for equities (assuming holdings are available) at the portfolio and composite level, including sector weightings, top holdings, country weights for non-US portfolios.

f. Breakdown of PSERS' fund market value.

AHIC's monthly and quarterly report provides a detailed breakdown of PSERS' fund market value by investment manager and a number of custom composites to reflect the asset allocation to meet the needs of PSERS' staff. For example, we break out market values in both levered and non-levered

composites and provide composites with and without currency hedging. AHIC sources the market value of assets from PSERS custodian and the individual asset managers.

g. Market conditions.

Please comment on your ability to provide draft quarterly performance reports within 3 business days following receipt of final quarter-end market values from our custodian and partnerships. Will you be able to issue final reports within 3 business days after receiving comments from PSERS on the draft? What quality control systems and procedures do you use to ensure that reports are prepared accurately and delivered on time?

Once final quarter-end market values are received from the custodian, as well as the investment managers, we can produce a draft quarterly performance report within 3 business days. Generally, we can also provide a final quarterly report within 3 business days after receiving comments from PSERS staff on the draft. Exceptions to that timing may include instances where new custom reporting needs to be built out, additional data needs to be sourced, or discrepancies with account history are being investigated.

We reconcile returns with investment managers, the custodian, specialty consultants, and client's staff, where appropriate. If unacceptable differences are noted, we contact the investment manager and work with them to resolve discrepancies. When all data is final and reports are produced in draft we have a very elaborate and detailed quality control checklist that is required to be completed by the analyst who produced the report and the consultant reviewing the report. Consulting team and analysts are in close contact with each other on progress of report and timing of all steps along the way in order to ensure reports are delivered on time.

Please see our response to Question M.8 for a description of our quality control procedures.

Provide sample quarterly pension fund performance reports.

Please refer to the **Appendix** section for a copy of the current PSERS' quarterly performance report AHIC prepares.

h. Describe in detail the performance measurement attribution and analysis service you propose to provide for PSERS. Note its usefulness for PSERS. Provide sample reports.

AHIC uses a third-party performance system, PARis, which allows for our performance attribution capabilities to be quite broad. We are able to use returns-based and holdings-based style analysis to attribute manager performance to combinations of market factors and security selection.

We also have the capability to design custom returns-based attribution (Excel-based) for clients looking for additional reporting that isn't supported by the PARis system. Using Excel-based attribution, we can isolate Selection Effect, Attribution Effect, and Timing & Interaction Effect at the composite-level, using either levered or unlevered NAVs and returns.

- 2. Describe the content, format, and method of delivery of the monthly performance reports you will prepare for PSERS and its advisors. Performance reports are deemed to be inclusive of ex-post risk reporting and analysis. Describe instances where performance and risk indices and benchmarks are different. The monthly reports will include only the public market portfolios and composites and will exclude the private market portfolios.**

We can produce monthly “flash” reports with preliminary performance results and index comparisons for public markets. Depending on how quickly we get information from the trustee and managers, monthly flash reports can be available 35–45 days following each month’s end. Our typical monthly report contains a performance summary table of the full public market investment program, asset allocation and attribution at the total public markets level; however, these reports can be fully customized to meet the needs of PSERS.

- a. Data and method used to calculate total return before and after fees. Please identify which criteria in your methodology can be customized by client preference. PSERS’ custodian bank, investment managers and/or fund administrators will supply a monthly portfolio asset list with accrual market values for marketable securities.**

Please indicate whether you use your own pricing sources and describe how you will investigate/resolve pricing errors in the custodian bank’s asset list. Describe how you handle pricing for derivative investments.

Our methodology for calculating investment performance in the PARis system is based on the modified Dietz method, as detailed in our response to Question a above, and our primary sources of data are custodial statements (defined benefit plans) and recordkeeper documentation and mutual fund data sources (defined contribution plans).

Please also see our response to Question a above for a description of our performance calculations and how we handle any discrepancies that may occur.

- b. Time periods for which total returns can be calculated.**

We calculate time-weighted returns on a monthly basis for public markets, and a quarterly basis for private markets.

- c. Standard indices, custom indices, and benchmarks you will use for comparison.**

Our performance measurement system has a vast selection of standard market indices from which to choose. Custom index blends or splices can be created within the system as long as the data for the individual indices are available.

- d. Total population of funds and public pension funds (including a large fund subset) you will use for universe comparisons.**

Below are the public plan universes available within our performance measurement system (as of December 31, 2018).

Peer Group Name	Peer Group ID
▶ All Public Plans-US Equity Segment	395
All Public Plans-US Fixed Income Segment	396
All Public Plans-Intl. Equity Segment	399
All Public Plans-Intl. Fixed Income Segment	400
All Public Plans-Real Estate Segment	401
All Public Plans-Total Fund	402
All Public Plans > \$1B-US Equity Segment	387
All Public Plans > \$1B-US Fixed Income Segment	388
All Public Plans > \$1B-Intl. Equity Segment	390
All Public Plans > \$1B-Intl. Fixed Income Segment	391
All Public Plans > \$1B-Real Estate Segment	392
All Public Plans > \$1B-Total Fund	393
All Public Plans < \$1B-Total Fund	398

e. Characteristics you will compare.

Our system can run numerous risk/return stats, including standard deviation, tracking error, information ratio, downside risk, correlation, beta, up/down market capture, Sharpe ratio, etc. We also can run holdings-based portfolio characteristics for equities (assuming holdings are available) at the portfolio and composite level, including sector weightings, top holdings, country weights for non-US portfolios.

Please comment on your ability to provide draft monthly performance reports within 3 business days following receipt of final month-end market values from our custodian. Will you be able to issue final reports within 3 business days after receiving comments from PSERS on the draft? What quality control systems and procedures do you use to ensure that reports are prepared accurately and delivered on time?

Once final month-end market values are received from the custodian, as well as the investment managers, we can produce a draft monthly performance report within 3 business days. Generally, we can also provide a monthly quarterly report within 3 business days after receiving comments from PSERS staff on the draft. Exceptions to that timing may include instances where new custom reporting needs to be built out, additional data needs to be sourced, or discrepancies with account history are being investigated.

We reconcile returns with investment managers, the custodian, specialty consultants, and client's staff, where appropriate. If unacceptable differences are noted, we contact the investment manager and work with them to resolve discrepancies. When all data is final and reports are produced in draft we have a very elaborate and detailed quality control checklist that is required to be completed by the analyst who produced the report and the consultant reviewing the report. Consulting team and analysts are in close contact with each other on progress of report and timing of all steps along the way in order to ensure reports are delivered on time.

Please see our response to Question M.8 for a description of our quality control procedures.

Provide sample monthly pension fund performance reports by asset class.

Included in the **Appendix** section is a copy of a sample Monthly Flash Report.

3. ***Describe in detail the PC-based or Internet-based fund management and consulting tools to which your firm will provide the Board and PSERS' Investment Professionals access. Provide sample reports. NOTE: PSERS may require a demonstration of such tools.***

Client Portal

Aon has partnered with Pivotal Labs to upgrade our entire global technology platform. The new portal is offered to all Aon clients with direct access to Aon's investment manager research including manager ratings, meeting notes, and thought leadership. New features are continuously being developed and tested with users. This secure channel will be Aon's primary distribution point for all client documents and deliverables. The information within the platform is interactive and will be automatically updated with the most recent data available.

Included in the **Appendix** section is the PSERS' Client Portal presentation.

4. ***Provide sample reports by asset class depicting investment and risk exposures, and note their usefulness for PSERS.***

Included in the **Appendix** section is the Asset Allocation by Manager report.

C. ***Defined Contribution Plan Experience***

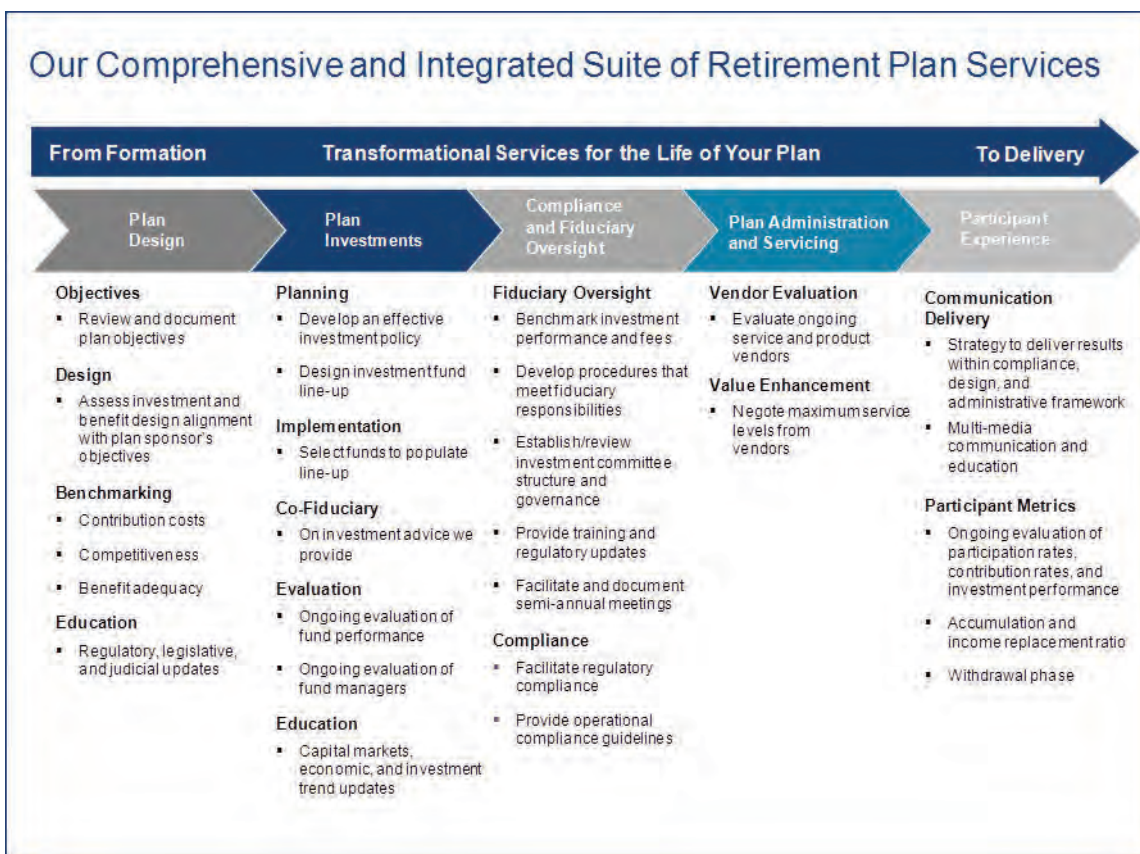
1. ***Describe the firm's experience in working with defined contribution plan sponsors.***

We have significant resources devoted to our defined contribution plan services, including such areas as administrative, total plan cost analysis, communication strategies, and other areas specific to defined contribution plans. We can provide significant resources to PSERS in this area.

AHIC has 306 defined contribution U.S. retainer clients with \$1,027 billion in assets under advisement (as of June 30, 2018, represents U.S. retainer clients).

2. ***List all of the firm's standard services provided in a typical defined contribution plan advisory and investment consulting relationship.***

AHIC has the ability to provide comprehensive investment consulting services to defined contribution plans. Our services provide the full spectrum from formation to delivery as outlined in the graphic below:



A summary of services that we provide clients includes the following:

▪ ***Investment Policy Development***

Assisting institutional investors develop investment strategy and clearly documenting such strategy through an investment policy statement is a particular strength of AHIC. Our many years of experience working with public funds has given us a unique perspective on the issues public funds face and the need for a clearly defined policy document to guide the prudent management and governance of a fund's assets.

▪ ***Investment Manager Evaluation and Monitoring***

Globally, our researchers work collaboratively with our investment consultancy affiliates to form our global manager research team that consists of more than 150 full-time global research professionals covering traditional, emerging, and alternative strategies, including operational due diligence (as of September 30, 2018) and is dedicated to researching and evaluating investment managers worldwide. Our manager researchers are based in the U.K., U.S., Canada, and Continental Europe and cover global markets and products. The team includes a number of former fund managers, providing valuable insights for analyzing investment firms. GIM continually monitors and rates managers' products—whether they currently manage client assets or they are being considered for a new mandate.

▪ ***Performance Measurement***

Performance reports provide the basis for close portfolio-level monitoring, a crucial fiduciary duty. In recognition of this fact, we have spent considerable resources developing reporting capabilities. Our

analysts help ensure our clients receive timely and accurate performance reports. Our reports are customized based on client needs; however they always include key metrics such as results compared to appropriate benchmarks, risk-adjusted results, key portfolio characteristics, and peer group analysis. We also provide custom, password-protected online portals for clients. These portals allow access to AHIC research and client-specific reporting, both current and archived.

▪ ***Fiduciary and Investment Education for Board and Staff***

We have a dedicated Fiduciary Services practice each with many years of experience working with state investment boards, governmental entities, and public retirement systems, as well as corporations. This allows us to provide services such as governance advice, fiduciary training, fiduciary audits, operational reviews, policy development, board member orientation, and facilitation of board self-assessments.

▪ ***Custom Target Date Funds***

AHIC has a wealth of experience working with defined contribution clients to create custom solutions rather than solely relying on off the shelf pre-packaged investment products. Our custom target date funds employ an open architecture investment platform and distinctive investment managers for its underlying investments, rather than being wholly reliant on one investment platform that is more typical for the target date funds offered by bundled investment providers. In addition, AHIC evaluates the demographic profile of our clients in order to determine the appropriate asset allocation glide path appropriate for client's plans, rather than utilizing a one-size fits all approach to asset allocation.

3. *List all of the firm's standard services provided in a typical defined contribution plan manager search and evaluation program.*

AHIC will assist PSERS in conducting investment manager searches; our services are detailed below. In addition, we are providing an outline of the steps taken during a manager search.

- Provide the following investment manager evaluation and selection services:
- Identify preliminary candidates favorably evaluated by AHIC researchers
- Evaluate preliminary candidates based upon PSERS' objectives and selection criteria
- Identify most appropriate investment management candidates
- Prepare materials reviewing suggested candidates (i.e., organization, staff, investment approach, performance, portfolio characteristics, etc.)
- Meet with PSERS to discuss suggested investment manager candidates
- Assist PSERS in selecting the most appropriate investment manager(s) for the Plan
- Assist PSERS in evaluating and selecting new or replacement investment managers on an ongoing basis, as necessary

AHIC's investment manager search process is designed to meet the needs of our clients. In the table below, we provide a summary of the typical investment manager search/due diligence process.

Process Step	Description
Determine selection criteria	Lead consultant would work with the staff and the Committee to determine selection criteria (e.g., investment style, experience, performance, fees, size, risk, stability of staff). We do not have a standard set of criteria for each search. Rather, we consider the

Process Step	Description
	circumstances of each opportunity and determine which criteria are most important to emphasize.
Identify preliminary candidates	Lead consultants, in coordination with investment manager research colleagues, would then screen our manager database to identify preliminary candidates that meet the selection criteria. If there are any candidates that the client would like us to consider, we can include them on our list as well. Using our InForm process, described below, we have the ability to efficiently obtain a quantitative scoring of each preliminary candidate. The benefits of this, including predictive modeling based on historical data, are described in depth below.
Update information/visit managers	We review the information in our databases regarding candidate managers, update the information, and visit the managers, as needed. While we typically have much of the quantitative data we require to screen managers and assign an initial score, we recognize the importance of a qualitative assessment. It is during this step in a search that we introduce our qualitative assessment. This includes meeting face to face with portfolio managers, analysts, traders, and executive management. We also conduct operational due diligence (ODD) on-site visits, which are led by our dedicated team of ODD professionals.
Select and profile finalist candidates	Based on the preceding analysis, the lead consultant, in conjunction with investment manager research, would review the candidates and propose finalists to the client. We typically narrow the field of candidates to three or four firms. For the finalist candidates, we provide a rating (described in detail below) and a comparative search report.
Discuss finalist candidates/interview finalists	We discuss the finalist candidates with the client and answer any questions. Additionally, we can help organize presentations by finalist candidates at our client's offices and participate in the interview process.
Select managers	Following the finalist interviews, the client is in a position to select the manager(s) that best fits its investment structure.

4. What are the firm's capabilities in the area of providing performance monitoring and evaluation of defined contribution annuity products?

Annuity products have unique characteristics distinct from traditional mutual fund products which need to be considered when evaluating these funds. We have extensive knowledge and experience monitoring annuity products. We evaluate both quantitative and qualitative aspects of investment managers and their organizations, including personnel, investment process, and performance. Many third-party record-keepers offer an option to annuitize the participant balances, but the usage of this option is low.

In addition to the criteria and factors we utilize for monitoring all investment products, we consider certain factors and details which are more relevant when evaluating annuity products. For example, the creditworthiness of an annuity provider is more important to an annuity's evaluation than the creditworthiness of a traditional mutual fund manager. Also, the guaranteed rate and crediting rate on the annuity varies by contract-type, so the evaluation must account for this detail. We consider the unique attributes of each contract in determining its ratings.

We have devoted considerable resources to the evaluation of annuity and retirement income solution providers. These include in-plan and out-of-plan solutions for managed payouts, annuity purchase options, deferred annuity options, guaranteed minimum income benefit (GMIB) options, guaranteed minimum withdrawal benefit (GMWB) options, and rollover options.

Our analysis typically includes an evaluation of the income guarantee, inflation protection, credit risk, underlying investments, fees, portability, flexibility, transparency, and ease of communication of the annuity or other retirement income solution.

5. Describe the firm's methodology for determining types of funds in the investment line-up.

For several years, we have recommended our clients consider separating the investment options into tiers in order to better facilitate participants' decision-making process. A typical investment structure that we believe reflects industry best practices is shown below:

Possible Tier	Characteristics
Target Retirement Date Funds	Simple packaged solution requires less time and expertise Built-in asset allocation that becomes more conservative as a participant gets closer to retirement
Core Funds	Limited number of active and passive options covering the key asset classes Requires asset allocation decision Committee monitors investments offered
Self-Directed Brokerage Account (as Permitted by Vendor)	Includes all mutual funds available through recordkeeper's brokerage account Participant has greater flexibility but also full responsibility for asset allocation and investment manager decisions

Within the Core Funds tier, our preference is to limit the number of funds, while still allowing participants the opportunity to build diversified portfolios that span the range of objectives typically used. This is because research⁹ shows that DC participants tend to make sub-optimal decisions when presented with too many options. We believe Core Fund lineups can be as few as four to seven options (when using white-label multi-manager options that are asset-class or objective-based). To the extent a plan sponsor does not want to streamline their menu this far, we generally favor fewer options and having a broad purview (e.g., offering an "All Cap or All Cap Global" portfolio instead of having individual style box options for value, growth, and blend of large, mid, and small cap. We also believe it is important to include low-cost index fund options with broad market coverage.

The plan sponsor decision on how many and what types of investment choices to offer to participants is addressed by considering several factors, as follows:

Philosophical Issues	Investment Issues	Administrative Issues	Compliance Issues
<ul style="list-style-type: none"> What do plan participants want? Brand name importance/recognition Payment of expenses by participants Level of paternalism Investment education Automatic enrollment 	<ul style="list-style-type: none"> Number and type of funds Role of lifestyle/lifecycle funds Active versus passive management Retail funds versus institutional funds Window/self-directed option 	<ul style="list-style-type: none"> Bundled versus unbundled arrangement Daily valuation Total plan cost Number of recordkeepers 	<ul style="list-style-type: none"> 404(c) requirements Investment communication/education Fiduciary checklist

6. Describe the firm's methodology for determining the asset classes to be recommended to a defined contribution plan sponsor.

An important first step in our engagements is conducting a thorough review of the plan's current investment structure, which encompasses the methodology for asset class recommendation. This Investment Program Review includes the following steps:

Step 1: Determine of Overall Investment Structure: The investment structure review portion includes analysis of the existing plans as a starting point, industry trends and practices, and key investment issues. Investment issues includes the types of investment options to offer participants, the number of offerings to include, the role of passively-managed products, QDIA (qualified default investment option), growth versus value-oriented products, white label funds and the use of target retirement date products (including custom).

The most important plan sponsor decision is how many and what types of investment choices to offer to participants. This decision is addressed by considering several factors, as follows:

Philosophical Issues

- What do plan participants want?
- Brand name importance/recognition
- Payment of expenses by participants
- Level of paternalism
- Investment education
- Automatic enrollment

Investment Issues

- Number and type of funds
- Role of lifestyle/lifecycle funds
- Active versus passive management
- Retail funds versus institutional funds
- Window/self-directed option

Administrative Issues

- Bundled versus unbundled arrangement
- Daily valuation
- Total plan cost
- Number of recordkeepers

Compliance Issues

- 404(c) requirements
- Investment communication/education
- Fiduciary checklist

Step 2: Review Investment Options: We will review the investment options currently offered in the plan. We will examine the investment results of each option versus appropriate benchmarks and peer groups. AHIC maintains extensive databases of funds and more than 300 market benchmarks for comparative

purposes. In addition to traditional performance analysis, we include risk/return analysis relative to appropriate benchmarks. We will provide an assessment of the portfolio characteristics of each investment option versus an appropriate benchmark to determine if a fund's characteristics are consistent with its stated approach. Lastly, we include an evaluation of fund fees and compare these fees to industry standards. We will suggest less expensive fund share classes, where appropriate.

Step 3: Suggest Investment Changes: We will propose new investment options for the committee's consideration if:

- Funds currently offered are inappropriate for the plan's participants.
- The plan investment structure (as determined in Step 1 above) has changed.
- Current funds have performance or qualitative issues.

After a comprehensive discussion on plan objectives and sponsor needs, the client's specific objectives determine the asset classes to be included.

7. *What is the firm's philosophy on default investment options?*

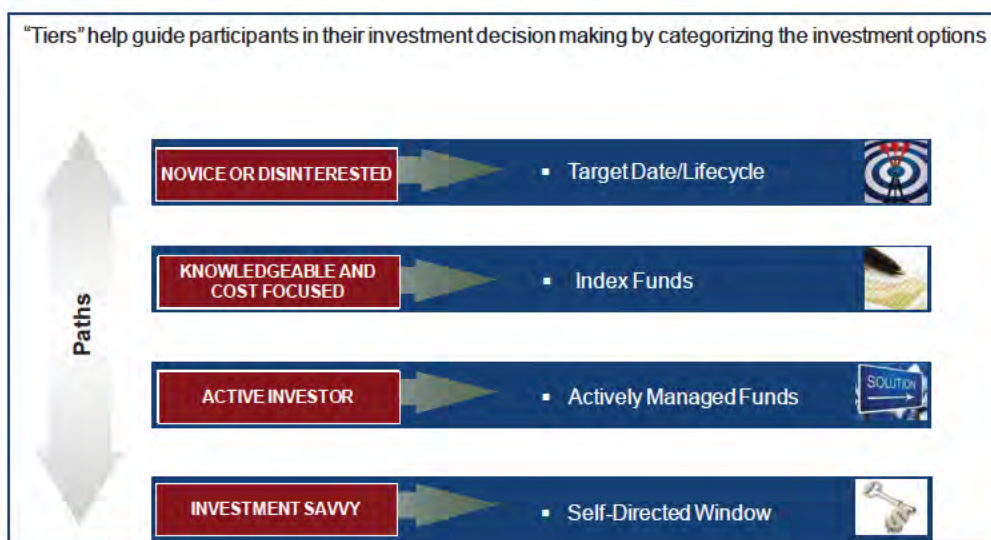
The majority of our clients employ target date funds as the Qualified Default Investment Account ("QDIA"). We have experience with Managed Accounts and believe that Managed Accounts are also an acceptable QDIA for a DC Plan. As with any solution, there are pros and cons, and we work with each client on a customized basis to determine the best solution for the organization and its participants. Most of our clients utilize target date funds as their QDIA.

8. *What is the firm's philosophy on tiered investment options (i.e., target date funds, core array, brokerage account, etc.)?*

AHIC believes DC investment options should be constructed in tiers to help a wide range of participants with varying investment knowledge and different "comfort zones" making asset allocation decisions. We recommend communicating the lineup within a tiered structure to accomplish this objective.

The tiered structure objective is to help participants build portfolios that span the risk and return spectrum. In general, we favor fewer options with a bias towards broadly diversified options that provide comprehensive major asset class coverage. Typically, it would be a two tier structure with a QDIA Tier (e.g. TDF), a Passive Tier with 3-4 broad market index funds and a Core Fund Tier with 4-6 options. AHIC believes a smaller number of core options with broader mandates allow participants to be more successful building their own asset allocations.

The central ingredient for the active tier is to focus on skill and the identification of this skill in advance.



Please also see our response to Question 5 above.

9. What is the firm's philosophy on the number of participant directed investment options that the Defined Contribution Plan should provide?

We tend to favor plans with 15 or fewer investment options (target date series counts as one option).

10. What is the firm's philosophy regarding active versus passive participant directed investment options?

We believe DC plans should include both passive and active fund options within the investment line ups. Many of our current clients include a "tier" approach that includes both a passive and active tier. The passive tier includes standalone index funds in the major asset categories: fixed income, U.S. equity, and non-U.S. equity. The active tier is based on the desired lineup structure (i.e., Asset Style, Asset Class, or Objectives).

Our tiered approach is designed to give participants choice between active and passive options. Many investors have strong views and beliefs as to the relative merits of active and passive management. Communication of tiered approach is key to this approach. The communication should be designed so that participants can determine a path based on their investment preference. This is based on our analysis of the behavior of decision making of participants. If a participant can determine if they want broad investment in a low fee vehicle, then the passive tier is their best suite of options. If a participant understands the use of any active management within an investment program introduces benchmark risk, then he or she can focus on options within the active tier.

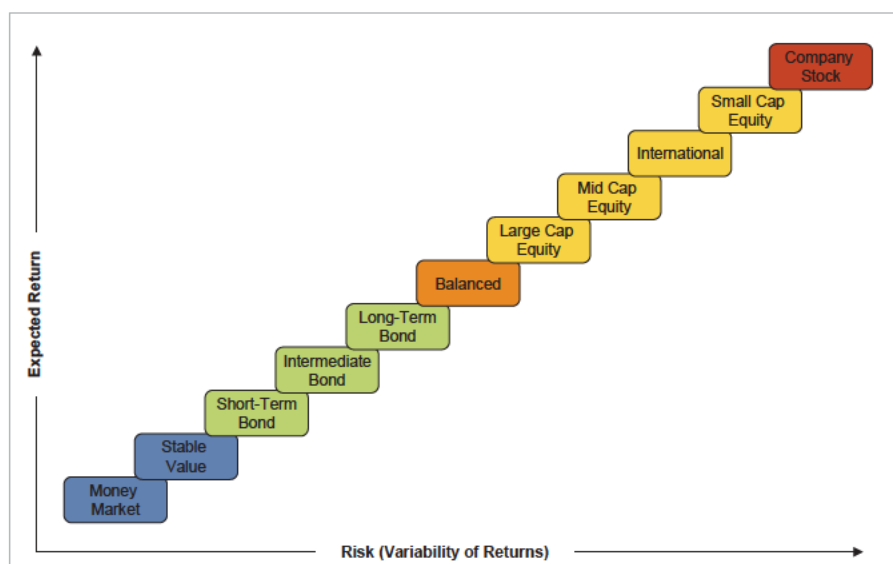
The active and passive decision within a DC plan is another example of how we look to improve participant outcomes by focusing on behavioral elements of a participant.

11. How would the firm evaluate the types of risk associated with the Trust investments you would recommend for the Defined Contribution Plan?

We believe that the most important issue to be evaluated in determining the fund structure in a defined contribution plan is coverage of the risk–return spectrum. Plan sponsors should offer a wide range of

investment options (covering multiple asset classes) to allow participants exposure to low risk options as well as aggressive options.

The graph below depicts a sampling of asset classes in a risk–return spectrum.



Within asset classes, style diversification should be sought. For instance, large cap could include large cap value, large cap core, and large cap growth options. We believe that style is an important variable to consider and understand. At different points in time, a particular style may be in favor (e.g., value outperformed growth from 2000–2006), and it is important for the plan to not make unintended style bets.

Our goal will be to determine whether any additional asset classes should be offered to plan participants that are not currently available under the plan.

12. Does the firm have experience in evaluating third party administrator services? If yes, please describe.

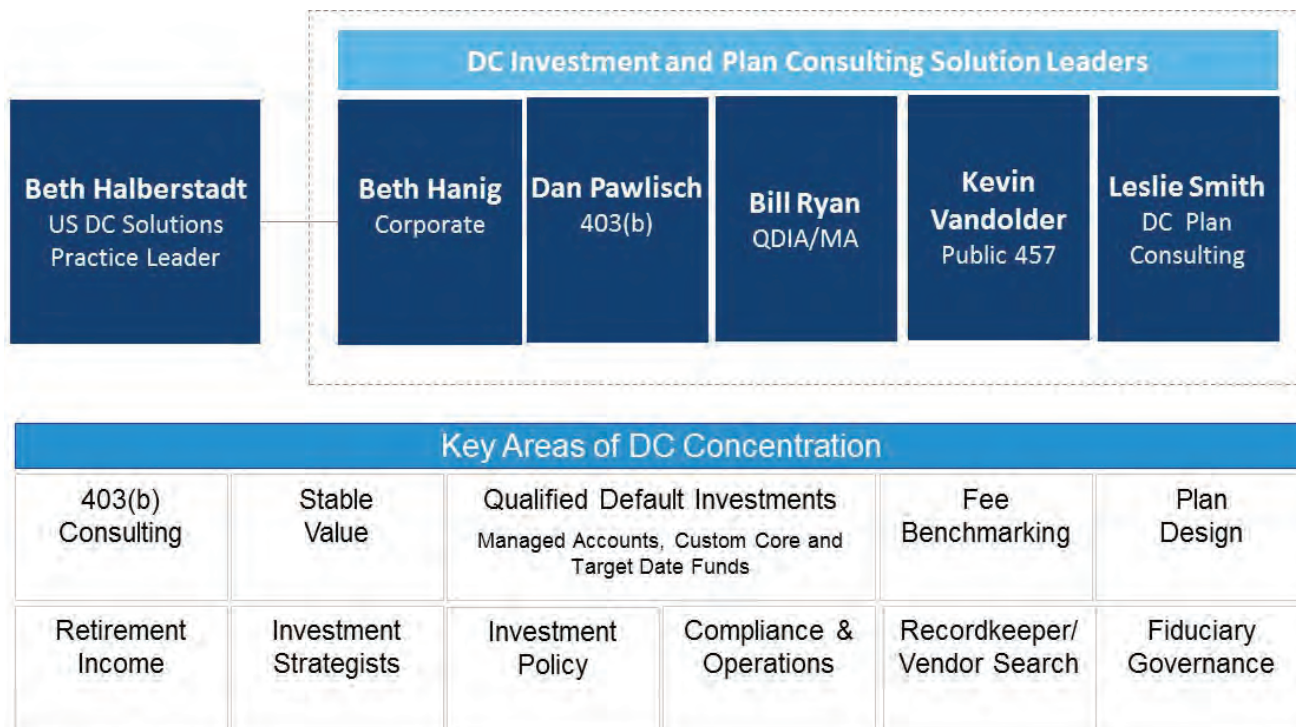
We have a proprietary retirement plan vendor database and work with over 46 vendor service models (as of September 30, 2018); these include insurance companies, banks, investment management companies, third-party administrators that provide unbundled and bundled recordkeeping/administration, investment management, custodial/trustee, and communication/education services for employer-sponsored plans.

Our knowledge of the third party administrator / vendors was developed through numerous recordkeeping searches that include due diligence on all facets of the vendor services, including administrative and compliance procedures. AHIC also works with vendors for numerous clients on an ongoing basis to continue to monitor their performance to ensure our clients' fiduciary requirements are fulfilled.

The scope of a procedures review for a defined contribution recordkeeper can vary greatly depending on the level of detail. It can range from an extensive compliance and operational review, where all transactions are sampled and tested, along with all of the corresponding procedures are reviewed and documented, to a straightforward review of administration manuals and materials that are prepared and provided by each vendor.

13. Does the firm have resources dedicated to defined contribution consulting and/or research? If yes, please describe and provide organizational charts and biographies as appropriate.

Following is a list of the appropriate resources beyond your account team is made available to meet your defined contribution needs (as of January 01, 2019).



As of 1/1/2019

14. List other special or unique services that the firm has provided to other clients, particularly defined contribution plan clients.

As mentioned earlier, two unique services that AHIC can provide include:

- **Fiduciary and Investment Education for Board and Staff**

We have a dedicated Fiduciary Services practice each with many years of experience working with state investment boards, governmental entities, and public retirement systems, as well as corporations. This allows us to provide services such as governance advice, fiduciary training, fiduciary audits, operational reviews, policy development, board member orientation, and facilitation of board self-assessments.

- **Custom Target Date Funds**

AHIC has a wealth of experience working with defined contribution clients to create custom solutions rather than solely relying on off the shelf pre-packaged investment products. Our custom target date funds employ an open architecture investment platform and distinctive investment managers for its underlying investments, rather than being wholly reliant on one investment platform that is more typical for the target date funds offered by bundled investment providers. In addition, AHIC evaluates the demographic profile of our clients in order to determine the appropriate asset allocation glide path appropriate for client's plans, rather than utilizing a one-size fits all approach to asset allocation.

▪ **Managed Account Services**

We believe participants need tools. Specifically, investment advice and managed accounts are of great interest to our clients. We have composed a DC specific research group focused on investment advice and managed accounts providers. Our dedicated managed accounts team conducts ongoing due diligence on providers. The focus of our reviews is to analyze a provider's managed account product from a methodology and service model perspective for general suitability and fee reasonableness. We will review protocols at the provider to ensure they adhere to DOL rules relating to Managed Accounts, including verifying that staff members have appropriate qualifications and designations; systems and procedures are audited, documented, and certified; fees are appropriate; and fiduciary protections are clear and sufficient. On a periodic basis, we issue questionnaires, which act as a basis for our ongoing due diligence, to the providers in order which provide updates on aspects such as:

- Organizational information
- Investment & technology professionals
- Product description
 - Robustness of analysis
 - Option level analysis
 - Risk
- Auto-rebalancing
- Asset allocation methodology
- Summary of model specifics
- Fund option analysis
- Other: e.g., data feeds available from providers; advice provided re: participant distributions
- Interaction with participants
- Fees and timing

We do have a lot of experience with Managed Accounts, and as with any solution, there are pros and cons, and we work with our clients to determine the best solution for your organization and participants. We generally have a favorable view of managed accounts and do support offering them to participants. Additionally, we believe managed accounts can be beneficial because research shows that the majority of participants do not adequately address retirement financial goal planning and do not form efficient portfolios. Even when participants are advised appropriately, a large number of participants do not implement the recommendations. The primary reasons include lack of interest, knowledge, or time, as participants need all three to be successful in forming their own efficient portfolio.

Managed accounts also help participants understand the impact of their deferral rate and plan for taking distributions during retirement. Our research and experience indicates that managed accounts are generally more compelling for participants between the ages of 40 and 55 which represents an inflection point when many participants have meaningful account balances, diverse risk profiles, and more unique individual circumstances that would otherwise warrant a customized approach.

The main considerations of managed accounts are the higher costs, as managed account providers generally charge a basis point fee on top of the underlying fund fees. In addition, offering managed accounts requires additional oversight and review of the service provider. Our DC teams have

extensive experience in conducting managed account reviews and maintain a deep knowledge of the managed accounts market.

- **Mutual Fund and Brokerage Windows**

In July of 2012, the Department of Labor (DOL) released a Field Assistance Bulletin (FAB) which stated that plan sponsors have an obligation to monitor the “nature and quality” of brokerage services provided in a window, but underlying investments within the window would not be treated as “designated investment alternatives.”

In an attempt to monitor the “nature and quality” of SDBA providers, AHIC has developed a proprietary dashboard which reviews key factors of 15 of the largest providers in the industry. Some factors the dashboard includes are fees, breadth of offerings, and administrative features such as automation and platform compatibility. For those clients who currently offer a SDBA, the dashboard is intended to highlight the strengths and weaknesses of the current offering to determine if participant communication should be revised or whether the SDBA should be a plan feature moving forward. Each dashboard is updated on an ongoing basis and typically reviewed with clients every 12–18 months.

III-8. Miscellaneous

A. Please discuss the appropriate role(s) of risk management in administration of investments for a public pension plan such as PSERS. Specify criteria that should be measured and analyzed, and the appropriate role(s) of the Board, PSERS’ Professional Staff, and consultant in measuring and analyzing the risk criteria. How does this relate to your definition of beta? How does this relate to your views on the separation of alpha from beta? Do you think of risk using a risk factor approach?

A strong risk management philosophy permeates all advice we provide our clients. We divide the issue of risk management within an investment organization between investment risk and non-investment risk.

AHIC has a Global Investment Policy Services team focused on risk management. This team leverages the expertise of individuals worldwide with backgrounds in investment management, actuarial science, and investment banking.

With respect to investment risk, we focus on various risks over the short-term, medium-term and the long-term. We have found it is important to take risks to generate returns. Risk is primarily addressed through the asset allocation process to help ensure that the right level of risk (fund’s overall risk posture) and that the right types of risks (investment strategy, risk budgeting and contribution of risk from various asset classes) are taken which may be rewarded and potentially help the plan meet its objectives.

With respect to shorter term investment risks, we refer to issues relating to portfolio structure and implementation. These risks are addressed by the design of the investment strategy within each asset class, the active risk budgeting exercise, asset allocation compliance, etc.

The following table lists key risks and ways to measure, manage and address these risks.

Types of Risk	Time Horizon	Risk Management Tools and Controls
Return shortfall ▪ Assets do not grow with liabilities	Long-term (10+ years)	▪ Investment policy

Types of Risk	Time Horizon	Risk Management Tools and Controls
<ul style="list-style-type: none"> Investment return and contribution less than liability growth 		
Liquidity <ul style="list-style-type: none"> Cannot liquidate assets efficiently to meet needs Lose control of asset allocation 	Short- to medium-term (<5 years)	<ul style="list-style-type: none"> Funding policy Benefit accruals Use of illiquid investments Scenario analysis Monitoring
Investment <ul style="list-style-type: none"> Asset allocation (policy) Investment structure Manager selection Rebalancing Scenario (or path risk) Factor 	Short- to medium-term (<5 years)	<ul style="list-style-type: none"> Investment policy statement <ul style="list-style-type: none"> Static/dynamic Asset allocation Rebalancing Manager guidelines Monitoring/roles and responsibilities Risk budgeting Monitoring/dashboards Medium term views Regression and scenario analysis

With respect to non-investment risks, we focus on aspects such as fiduciary and governance processes. AHIC has a dedicated Fiduciary Services practice that assists our clients on fiduciary audits and governance reviews and has experience with state investment boards, public retirement systems, and sovereign wealth funds in the U.S. and abroad.

Our proprietary AHIC risk budgeting model may be an effective way to evaluate the sources of beta and alpha risks present in the investment program. A defining feature of our risk budgeting model is that it includes both beta (policy) risk attribution and alpha (active/implementation) risk attribution components at the total fund, asset class, and manager levels. The model also incorporates mean variance optimization with risk budgeting. The assertion is that whenever there is a tradeoff between expected risk and expected return, there is an opportunity for optimization—whether of asset allocation in total return space or of manager roster in active return space. Clients may perform optimization by maximizing expected alpha for a given level of active risk across all manager candidates in an asset class.

With respect to non-investment risks, we focus on aspects such as fiduciary and governance processes. AHIC is the only investment consulting firm with a dedicated Fiduciary Services practice. The Fiduciary Services practice is led by Jeanna Cullins, who is an attorney. Our dedicated fiduciary services team assists our clients on fiduciary audits and governance reviews and has experience with state investment boards, public retirement systems, and sovereign wealth funds in the U.S. and abroad.

B. Please discuss your views on the appropriateness of either passively managed portfolios, actively managed portfolios, or a combination of both actively and passively managed portfolios, by asset class. What important factors must be considered by a pension fund such as PSERS in order to determine which of these approaches is likely to be most beneficial?

The choice between active and passive depends on market efficiency. The relative efficiency of markets and risk control considerations should determine the role of passive management in an investment program. The use of any active management in an investment program introduces benchmark risk, which is the risk of earning a return different from that of the policy benchmark. The degree of benchmark risk that investors

assume, within a given asset class, should be directly proportional to the level of confidence that the risk will be compensated by excess returns, relative to the benchmark. Risk control is important in all aspects of an investment program, but especially so in those markets that exhibit a high degree of operational and informational efficiency. Operational efficiency refers to information inefficiencies that may exist that investment managers cannot collectively capture and deliver to investors as performance, due to the presence of transaction costs and management fees.

Developed market equities are an efficient asset class so a passive or smart beta approach may be attractive. Over the years, commonly-used, publicly-traded asset classes, such as equities and investment grade bonds, have become more informationally efficient, meaning that it has become increasingly more difficult for active managers to outperform their benchmark indices persistently over time. There are several reasons for these changes, including the advent of information technology that has made investment information more broadly and readily available, the integration of global financial markets, and the information flow between markets.

AHIC favors a higher degree of indexation, or passive management, in markets that are highly efficient. A classic example of this is the U.S. large cap equity market, which offers perhaps the most striking example of an operationally-efficient market. This does not preclude the hiring of active managers in U.S. large cap equities, but it can raise additional complications.

We look across the whole portfolio to decide how and where to employ active management. But accurate assessment of the value of active management should occur at the portfolio level, not just at the manager level. By careful selection of complementary managers with low or negative correlations in their active management returns, the portfolio of active managers can actually exhibit better downside protection than a purely passive approach, with potential expectations of outperformance through a complete market cycle. It may be that it is more efficient to hold passive developed market equities, but to allocate to a number of equity long-short hedge funds.

Ultimately, the decision of how much to invest actively and passively in each asset class is highly client-specific. The optimal mix for a particular client depends on factors such as risk control preferences, desired number of managers, level of confidence in active management, propensity to deal with active manager underperformance over short-term periods, and sensitivity to investment manager fees. AHIC works closely with clients to determine the approach that will maximize the success of the investment program.

C. *In which circumstances might ETFs be appropriate for PSERS? What risks, benefits, and other factors must be considered? Please be specific.*

We advise on the use of ETFs on a limited basis, for example, to gain short term exposure during a portfolio transition. We have found that institutional mutual fund and commingled fund vehicles are typically more cost effective long-term investments than ETFs for broad asset class exposures. We have avoided exchange traded notes (ETNs) due to lack of transparency and added issuer credit risk.

ETFs may be appropriate for PSERS if they seek to make some tactical allocations changes within the portfolio over a shorter time horizon. ETFs are also helpful in filling in potential gaps in exposure of a particular industry or sector.

D. For each asset class specified below, identify the role you see it playing in a large pension fund today and in the future, and identify form (e.g., separate account, derivative) of investments (if any) you feel are prudent.

1. Real Estate

The real estate market is transitioning from recovery to expansion after five years of above average performance for stabilized core assets. Capital markets have gained strength each year following the Global Financial Crisis which affected the real estate markets in 2008–2009. Transaction volumes have increased in each subsequent year and risk premiums (cap rates and discount rates) have compressed significantly, largely in part to a low interest rate environment brought on by quantitative easing in the U.S. and around the globe.

Modest economic growth combined with historically low levels of new supply have created a positive environment for fundamentals (occupancies and rental rate growth) which have driven cash flow growth and aided to the above average returns. Certain sectors have benefited from additional tailwinds that have pushed returns even further. Apartments have been the prime example with significant weakness in the housing market due to tighter lending standards and a material reversal in the home ownership rate. Such strength has attracted capital for development of new assets which will prove to slow the pace of fundamentals and soften overall returns. New supply is now showing signs of returning to other sectors; however, there are no projections of overbuilding as lenders are still showing relatively good discipline.

Over the near term, we expect to see a more normalized return environment for real estate. As the cycle continues to age, we believe that investors should consider adding in some layered protection to moderate against the next down-cycle.

We recommend allocating real estate across both public and private markets and within the private markets across both core and non-core investments. In addition to the ability for core real estate to provide a degree of inflation hedging, it typically serves as a diversifier to other major asset classes within the growth or return-seeking portfolio. Core real estate provides the beta of the real estate asset class. We consider non-core real estate investments, including opportunistic real estate, as a long-term, skill-based investment focused on generating excess return. The vehicle type ultimately depends on the size of the allocation. Given the size of PSERS' portfolio and the allocation to real estate, we believe that real estate could be implemented through a combination of separate accounts and funds.

We have been a strong public advocate for using private real estate in defined contribution plans for several years, dating back to our 2013 white paper "Alternative Assets: The Next Frontier for Defined Contribution Plans." Alternative investments were once considered inappropriate for DC plans, but the landscape has changed significantly. AHIC believes there is strong applicability for incorporating alternatives into DC plans, which can enhance diversification and return potential.

Along with our enthusiasm for this approach, we also believe it is important to maintain a skeptical eye. There will always be a smaller universe of strategies and funds that are appropriate for DC plans relative to other types of investors, so high quality portfolios of alternatives will be inherently less diversified. But not all funds will suffer—some strategies can be ported into the DC arena without a significant loss in quality, and it is these strategies that will be most attractive. Investors must critically evaluate each investment option.

2. Commodities

Commodities have historically had a low correlation of returns as compared to stocks and bonds and offer

a hedge against inflation. We utilize commodities as a diversifying allocation within the return-seeking/growth portion of the portfolio. We tend to favor unconstrained strategies that have the ability to take long and short positions across the broad commodities complex. A vast majority of managers that we utilize tend to utilize derivatives to implement their strategies, although a select few will opportunistically also hold/trade physical commodities. A vast majority of commodity strategies are offered in commingled fund formats, although separate accounts can be utilized for larger mandates.

3. Infrastructure

AHIC believes infrastructure can provide additional portfolio diversification with its return profile (provided below) coupled with a mid-teens standard deviation of risk. We have been assisting clients deploy capital to infrastructure since 2005. As such, AHIC tends to work with infra managers who avoid auction processes and have demonstrated the ability to create investment opportunities or joint ventures with strong strategic partners/operators. We believe there are investment opportunities in North American infrastructure due to recent volatile commodity prices as well as Western Europe energy and utility assets as regulations force divestitures. We recommend clients utilize LP fund structures which provide clients access to private infrastructure investments.

4. Hedge Funds

Hedge fund performance has been generally disappointing since the 2007-2009 financial crisis. Structural factors have brought challenges for the average fund in the much-coveted objective of delivering returns that do not depend on market movements. These factors will likely persist, in our view. This has recently driven a lowering of our skill-based (commonly termed 'alpha') return expectations in our capital market assumptions. However, some of the disappointment over performance in recent years also reflects the effect of artificially dampened volatility and heightened cross-asset class correlation. This has arisen as a result of monetary policy by the major central banks. We think that these drags are not a permanent feature of markets and will gradually lift.

Additionally, fund selection needs to be a central focus of making hedge funds 'worth it'. Average hedge fund performance is not enough. Costs are too high for this average level of alpha. Without high conviction managers that deliver genuine alpha, hedge funds will not enhance portfolios. Even with our lowered return assumptions, hedge funds continue to look attractive strategically in risk-return terms. Allocations to hedge fund strategies continue to be portfolio enhancing and may help portfolios to deliver returns at lower risk.

Our medium-term views remain supportive of hedge fund allocations at this time. Bond yields are low and the equity return environment is likely to stay challenged. Volatility is likely to edge higher. In such a low return and more testing market return environment, hedge funds continue to look attractive. We believe clients should use long-short hedge funds with lower correlation to equities alongside long-only equities to diversify risk and dampen volatility. The opportunity costs of reducing equity beta are still not high, and our view remains that hedge fund approaches in portfolios are appropriate in this market environment—discretionary and systematic macro strategies could be considered alongside long-short.

5. Alternative (e.g., venture capital, private equity, private debt)

Our firm has advised clients on the use of private equity for over 40 years. Our firm supports the use of private equity and private debt in client portfolios, particularly for clients that have a long-time horizon, with the caveat that the client needs to have the resources and perspective to accommodate an alternative allocation.

Geographic diversification is a key component of alternative assets portfolio construction. As such, our team researches and recommends both domestic and international funds in a broad range of geographic regions. Our team customizes client recommendations based on each program's specific goals and risk tolerance. Each client is unique in terms of international exposure—some clients may allocate only a small percentage whereas other programs may allocate up to 40% to international opportunities. Our team utilizes a similar evaluation process for both U.S. and international partnerships. Aside from utilizing core due diligence evaluation techniques, we also consider additional items such as geopolitical, macroeconomic, and regulatory issues while evaluating international private equity funds. Our fund coverage includes both developed and emerging regions, as our team evaluates country-specific, regional, and pan-regional opportunities worldwide.

We consider the broad spectrum of private investments—across venture capital, growth capital, private equity, and debt—to be long-term, skill-based asset classes focused on generating an attractive return profile to help meet a fund's long-term objectives.

6. Risk Parity

Risk Parity strategies offer a potential diversifier to a traditional portfolio, to the extent that their performance is driven mostly by factors that are less emphasized in the remainder of a fund's total asset allocation strategy. Their equity risk-light approach may appeal to those skeptical about stocks. They offer a way to access skill in risk analysis and forecasting from some leading investment managers—and increasingly, they simply offer those firms' traditional active management skill. And they are generally still available at reasonable fee levels.

For those who desire a Risk Parity allocation, the strategy fits most neatly in an opportunistic or alternatives allocation, designed for strategies that do not fit well in a traditional asset allocation framework. Given the substantially increased benefits to leveraged strategies at higher risk levels, we generally recommend that clients consider Risk Parity products offered at relatively high levels of volatility, with a more modest allocation if needed to control risk.

7. Energy Master Limited Partnerships

We consider Energy MLPs to be a diversifying asset within the return-seeking portfolio that offers inflation hedging and an attractive return stream with a high degree of current income. The allocation can be implemented utilizing both separate accounts and fund vehicles.

8. Leverage

We believe leverage amplifies returns positively in up markets and negatively in down markets. We believe that investors should identify a comfort level on leverage and seek to build a portfolio that stays within those bounds. Leverage can and should be monitored as an ongoing risk management metric and should be reduced to moderate levels as the cycle progresses.

9. Smart Beta

In equity markets, the traditional passive market capitalization approach seeks to be well-diversified, and close to the efficient frontier. To the extent it does not achieve these aims, other approaches can be seen as more attractive (e.g., factor-based investing). Alternative indexation or “smart beta” is used to describe alternative ways of accessing “the market” in a systematic way.

AHIC believes that these strategies have the potential to offer better risk adjusted returns than market-cap passive strategies, but:

- This may not occur for protracted periods—the price of capturing the benefit of the factor is patience and often the ability to be contrarian.
- They are best used in combinations of uncorrelated factors such as Value and Low Volatility or Quality.
- Smart beta is not a replacement for high conviction skilled active managers.

Smart beta is not as cheap as the “bulk beta” solution offered by market-cap indexing, which will remain the “comfort” low governance choice for many investors and to which smart beta is likely to be compared.

Please note: The opinions referenced are as of the date of publication and are subject to change due to changes in the market or economic conditions and may not necessarily come to pass. Information contained herein is for informational purposes only and should not be considered investment advice.

10. Cyber Currencies (i.e., bitcoin)

Aon does not consider Cyber Currencies an asset class appropriate for institutional investors such as public pension plans.

E. Please discuss your firm’s ability and experience in performing detailed investment or operational due diligence reviews on public pension plans with internal investment management.

We have made a significant commitment to expand our operational due diligence (ODD) program, including hiring a Global Head of Operational Due Diligence and building a dedicated ODD team from a team of two to a global team of 20 (as of January 1, 2019).

The current dedicated operational due diligence team of 20 includes team members based in North America, London, and Bangalore, India. Collectively, the group has reviewed hundreds of investment managers across all asset classes, including both public and private market strategies. It is important to note that our team has diversified experience with a range of competencies including compliance, operations, governance, and counterparty risk. In addition, experience includes conducting operational due diligence reviews for an internal ODD program but also in a consulting environment, which has individual demands given the range of underwriting standards and deadline/workflow requirements for clients.

Recently, Aon has launched its ODD IQ program to service its internal operational due diligence requirements, along with those of select clients. The ODD IQ program is an initiative to supplement our traditional qualitative ODD process with an empirical framework to help identify and quantify non-investment risks among the investment managers that we review. We believe this approach is unique within the operational due diligence space and that it will help to improve the efficiency of our reviews, help to create objective reporting, and improve our ability to create risk reduction strategies for Aon and its clients.

F. What do you see as being the most significant changes that will be occurring in asset allocation for pension funds over the next 10 years? Please comment.

With increased pressure for public funds to achieve their expected asset return assumptions there is some pressure for some plans to “chase” returns to improve funded ratios. This has resulted in a trend to expand allocation to alternative/opportunistic asset classes which will likely to modestly continue over the next 10 years. Combatting this trend, is pressure among many public pension plans to reduce their investment management fees and increase their allocation to passive public market investments. We have seen some

plans, in particular, reduce their allocation to hedge funds. AHIC believes that it is imperative that public pension plans set their asset allocation without any undue increase in risk and we continue to believe hedge funds and other alternative asset classes play an important role within a plan's asset allocation as potential diversifiers, risk reducers and return enhancing strategies. The next 10 years are likely to be a period of increased volatility given the rising rate environment, late credit cycle and the late economic cycle we are currently in. During periods of market correction, active management tends to outperform passive management. Therefore, a continued focus on identifying strong active managers across both the public and private asset classes will do well. As interest rates increase over the next few years and funded status improves due to the increased contributions many pension funds are making, public pension funds will likely shift to higher fixed-income assets to take advantage of increased yields to match cash-flow needs. As global markets become more mainstream, the expansion to international investing (in both bonds and equity) is also likely to continue.

Please note: The opinions referenced are as of the date of publication and are subject to change due to changes in the market or economic conditions and may not necessarily come to pass. Information contained herein is for informational purposes only and should not be considered investment advice.

G. *Disclose all services provided and compensation received (including the sources of such compensation, whether direct or indirect) between your firm and investment managers, plan officials, beneficiaries, sponsors, and/or others as required by Standard 2b of the Investment Management Consultants Association Standards of Practice.*

AHIC does not receive any compensation from investment manager firms. We do provide fiduciary consultant services for the pension plans of some financial institutions that as part of their business provide investment management services. AHIC will disclose all services provided and compensation between AHIC and investment managers, plan officials, beneficiaries, sponsors, and/or others.

H. *Describe any business relationships that you or any of your affiliates have had within the past two years with the Commonwealth of Pennsylvania or with members of PSERS' Professional Staff or Board.*

AHIC serves as the current retainer consultant with the Commonwealth of Pennsylvania for the Pennsylvania Public School Employees' Retirement System since 2013. Through this relationship, we have also provided asset-liability studies and we are currently providing fiduciary training and governance work for PSERS' Board and staff.

In addition, AHIC works with Pennsylvania State Education Association (PSEA) and PSEA currently has a PSERS Board member that sits on the PSEA's Pension committee. Approximately two years ago, another PSERS Board member was a member of the PSEA's Budget committee.

I. *State whether you, any of your principals, or any other affiliates have any business involvements that could be viewed as potential conflicts of interest.*

To the best of our knowledge, there would be no conflicts of interest with our firm or principals serving PSERS.

J *Provide a copy of your current Code of Ethics adopted pursuant to 204A-1 of the Advisers Act.*

Please refer to the **Appendix** for AHIC's Code of Ethics.

K. What procedures and written policies do you have to reduce/eliminate any conflict of interest that could occur between investment managers and plan sponsors?

Our process for identifying and managing conflicts of interests begins with the diligence and awareness of our senior management team.

Second, AHIC has built into its corporate organization and affiliate relationships certain structural elements (separately created financial statements, independent research and manager review functions and other items) that allow it to evaluate investment managers and other investment service providers with a strong degree of impartiality.

Third, in areas where we have determined that potential conflicts may arise more often than in other areas, the senior management and compliance teams have drafted policies that are designed to mitigate potential conflicts. These policies and procedures, as well as our corporate structure, prohibit any form of payments or other financial considerations from influencing in any way the advice we give our clients.

Fourth, the firm requires all employees to subscribe to our code of ethics, which meets our fiduciary, legal, and regulatory standards. AHIC's code of business conduct sets the standard for all of our employees and governs the fundamental requirements for how we conduct business. Our code is subject to review by the Securities Exchange Commission. Further, the failure to adhere to the code could subject AHIC and its personnel to formal enforcement actions by the SEC. The code of ethics addresses conflicts of interest and actions that are contrary to the interests of clients and AHIC. All consultants must attest to that they have read and are compliance with the code of ethics on an annual basis. All monitoring is performed by compliance, and any exceptions are reported to AHIC's senior leadership. AHIC also adheres to, and receives training on, Aon's standards of conduct, which include client data confidentiality policies and trading restrictions.

L. Please state clearly whether your firm has any current tax issues or disputes with the Commonwealth of Pennsylvania (PSERS would be unable to execute a contract with your firm until these circumstances were resolved).

To the best of our knowledge, there are no current tax issues or disputes with the Commonwealth of Pennsylvania.

III-9. References

List five current pension fund clients as references. For each reference, include client name, name of contact person, address, telephone number, asset value of client, services the client uses, and number of years the client retained the firm. The client should have funds of similar size and complexity to PSERS and you should be providing services similar to those proposed for PSERS. PSERS intends to contact the references.

In addition, identify the five (5) largest clients lost within the last 5 years and indicate the reason(s) for termination. Include client name, name of contact person with title, address (both building and email), telephone number, services the client used, and number of years the client retained the firm.

Reference 1

New York State Teachers Retirement System	
Client Name:	New York State Teachers Retirement System
Name of Contact Person:	Thomas Lee
Mailing Address:	10 Corporate Woods Drive Albany, NY 12211-2395
Telephone Number:	+1.518.447.2940
Asset Value of Client	\$120 Billion
Services the Client uses	General DB Pension Consulting
Number of years the client retained the firm	8 Years

Reference 2

State of Connecticut	
Client Name:	State of Connecticut
Name of Contact Person:	Laurie Martin
Mailing Address:	55 Elm Street Hartford, CT 06106
Telephone Number:	+1.860.702.3195
Asset Value of Client	\$3.5 Billion
Services the Client uses	Defined Contribution Consulting
Number of years the client retained the firm	7 years

Reference 3

Colorado Public Employees' Retirement Association	
Client Name:	Colorado Public Employees' Retirement Association
Name of Contact Person:	Amy C. McGarrity, CFA Chief Investment Officer
Mailing Address:	1301 Pennsylvania Street Denver, CO 80203
Telephone Number:	+1.303.863.3709
Asset Value of Client	\$47.0 billion
Services the Client uses	DB General Consulting
Number of years the client retained the firm	15 years

Reference 4

The Commonwealth of Massachusetts	
Client Name:	The Commonwealth of Massachusetts
Name of Contact Person:	David Lynch
Mailing Address:	Office of the State Treasurer One Ashburton Place Boston, MA 02108-1608
Telephone Number:	+1.617.367.3900
Asset Value of Client	\$8.6 billion
Services the Client uses	DC General Consulting
Number of years the client retained the firm	9 years

Reference 5

Minnesota State Board of Investments	
Client Name:	Minnesota State Board of Investments
Name of Contact Person:	Mansco Perry III , CFA, CAIA, CIPM
Mailing Address:	60 Empire Drive # 355, St Paul, MN 55103
Telephone Number:	+1.651.296.3328
Asset Value of Client	\$66.6 billion
Services the Client uses	DB General Consulting
Number of years the client retained the firm	1 year

Inclusion in this list does not represent a recommendation or endorsement of Firm's products and/or services, nor are they exclusively representative of the product(s) discussed herein. Clients included in this list are the institutional clients which have provided written consent to Firm to be named in marketing materials. It is not known whether all clients listed above approve or disapprove of AHIC or the advisory services provided.

Client departures occur for a variety of reasons. In some instances, AHIC has declined to renew its contract, while in other instances the client has ended the relationship. Some causes of relationship terminations may include: a client's budgetary constraints, a difference in investment philosophy, and mergers and acquisitions. It is our standard policy not to release the contact information of terminated clients. (We are not sure if former clients would want us releasing this information.) If AHIC were to make it to the finalist round, we would be happy to discuss specific terminated relationships with PSERS in more detail at that time. However, we have provided our five (5) largest public sector clients lost over the last five years (as of June 30, 2018).

Client Name
Maryland State Retirement and Pension System
New York State Common Retirement Fund
South Carolina Retirement System
Florida Department of Financial Services
Ventura County Employees' Retirement Association

It is not known whether all clients listed above approve or disapprove of AHIC or the advisory services provided.

III-10. Work Plan

Describe in narrative form your technical plan for accomplishing the work. Use the task descriptions in Part IV of this RFP as your reference point. Modifications of the task descriptions are permitted; however, reasons for changes should be fully explained. Indicate the number of person hours allocated to each task. Include a Program Evaluation and Review Technique (PERT) or similar type display, time related, showing each event. If more than one approach is apparent, comment on why you chose this approach.

AHIC will provide all the consulting services outlined in Part III of the RFP. Below is a description of the tasks we anticipate completing as part of the engagement. We have also included a Gant chart depicting all of the tasks outlined in Part III which is included after our narrative response.

A. In providing Consulting Services for the Fund, and for all major asset classes, the consultant will:

- 1) Conduct a comprehensive review and analysis of investment objectives, policies, asset allocation, and portfolio structure, inclusive of defining an investable risk beta portfolio, and recommend changes, if appropriate.***

At the beginning of our engagement, AHIC will conduct an investment policy and structure review of the PSERS program. This analysis is separate from an evaluation of the asset allocation policy which will be evaluated as part of the asset liability study outlined below in item 3. As part of this analysis we will review each major public asset class investment structure with a focus on asset class coverage, overlap of investment managers, active risk employed in each composite. As part of this analysis we will conduct holdings-based analysis on all public equity portions of the portfolio as well as an analysis of the portfolio risk of each composite and the total PSERS portfolio.

As part of this review we will identify any potential manager issues that may need further evaluation as well as evaluate the active/passive allocation and provide a thorough benchmark evaluation for each policy allocation.

An estimate of the total person hours is 400 hours.

- 2) Review the adequacy of PSERS' Investment Professionals and resources, and make recommendations on PSERS' Investment Professionals and resource changes, if any.***

We have already begun our review of the Board's investment staff and resources by updating and issuing our DDQs. Once these DDQs are complete, Aon's research team will conduct a series of in person interview of all the staff to determine their roles, responsibilities and processes. We will leverage members of both our Fiduciary Services team and Global Investment Manager Research team (GIM) to conduct these interviews and evaluations. Once these interviews are complete, we will prepare our report with recommendations that will highlight any potential areas of potential risk in such areas as the size of staff, skill of staff, and strength of processes. In addition to evaluating the current PSERS investment staff, Aon suggests that in addition it may be beneficial to include an assessment of the current SERS investment staff capabilities in our analysis given the efforts in the legislature to combine the investment resources of PSERS and SERS in response to the recommendations of the Pennsylvania Public Pension Management and Asset Review Commission.

An estimate of the total person hours is 160 hours.

- 3) *Work with PSERS' Investment Professionals and the actuary to conduct an asset/liability study annually for each calendar year and present the results to the Board in March of the following year.***

At the outset of our engagement with PSERS, we will undergo a thorough review of the asset allocation policy as part of a full asset liability study. As part of this study we will work with PSERS' actuary Conduent to obtain all of the necessary actuarial information utilized in their annual valuation. We will load this information into our actuarial modeling soft-ware and conduct a complete asset/liability study as described in our technical proposal. Annually, Aon will update our asset/liability study and present to the Board consistent with our current annual asset/liability study.

An estimate of the total person hours is 200 hours.

- 4) *Work with PSERS' Investment Professionals to develop an appropriate investment management structure for the Fund and each asset class that considers the role of active versus passive strategies, investment management styles, and separation of alpha from beta under different market conditions.***

This analysis will be conducted as part of the investment structure review outlined in item 1.

- 5) *Recommend appropriate performance benchmarks for individual portfolios, each asset class, and for the total Fund.***

This analysis will be conducted as part of the investment structure review outlined in item 1.

- 6) *Review and make recommendations regarding individual portfolio guidelines at least annually.***

AHIC will conduct a review of all the individual portfolio guidelines as part of our initial review of the PSERS investment structure. We will complete this first review by August 2019. As part of this review, we will review the appropriateness of benchmarks, investment expectations and specific guideline constraints to ensure consistency with the investment mandate, our understanding of the manager's capabilities, risk tolerance and industry standards. This review will exclude all alternative (hedge fund, private equity and real estate) investment mandates.

An estimate of the total person hours is 180 hours.

- 7) *Recommend suitable investment opportunities and practical implementation methods; research supporting such recommendations must have been completed within the prior 12 months.***

- 8) *Recommend appropriate investment strategies, tactics, procedures, and practices.***

- 9) *Provide research reports on asset allocation, investment issues, and provide description and evaluation of alternative approaches.***

Please see item 10 below for a description of our services.

10) Provide information on market conditions and explain their impact on the Fund's investments.

Items 7–10 listed above are included as part of on-going retainer relationship. AHIC will provide staff and the Board with our best thinking on new investment opportunities as they are identified as well as provide advice on the best way to implement these investment ideas.

PSERS will receive all of our research reports on asset allocation, capital market assumptions, new investment ideas, etc. In addition, AHIC provides insights regarding the current market conditions on a regular basis. PSERS will receive all AHIC's research pieces on the market environment.

Access to this research is continuous and ongoing, therefore we are unable to provide an estimate as to the person hours associated with these items.

11) Provide PSERS with information on high conviction new managers at the earliest possible juncture to permit PSERS to secure capacity and negotiate terms with promising emergent managers.

Please see item 12 below for our description of our services.

12) Assist PSERS' Investment Professionals in conducting public market investment manager searches and facilitate the hiring of suitable institutional quality managers; including:

- a. providing opportunities and expense reimbursement for PSERS to jointly meet and evaluate new managers at industry conferences;**
- b. providing a list of potential institutional quality managers appropriate for the mandate being considered;**
- c. conducting interviews with potential managers at PSERS;**
- d. conducting on-site due diligence meetings with potential managers prior to their selection; and**
- e. providing assistance with the contract/fee negotiations.**

AHIC will provide the PSERS' staff with assistance in conducting public market investment manager searches as outlined above in items 11 and 12. As part of our search process we the investment consulting team will work with AHIC's GIM team to identify potential investment manager candidates for either new public market investment mandates or as replacements to existing investment mandates. As part of our manager research and rating process, GIM conducts on-site due diligence meetings. Our GIM and investment consulting team will assist PSERS staff with the interviewing and contract/fee negotiations of the firms identifies as finalist candidates for a search.

Manager searches are an on-going service AHIC anticipates conducting with PSERS staff throughout the term of the investment consulting contract. An estimate of the total person hours associated with a typical investment manager search is 50–75 hours.

13) Provide on-going monitoring and oversight reports for all of PSERS' public market investment managers, including:

- a. advance notice to PSERS of in-person meeting with investment managers in the Fund's portfolios;**

- b. analysis of the manager's absolute and relative performance in relation to benchmarks, investment objectives, and peer groups, including analysis of ex-post risk-adjusted performance;**
- c. an analysis of attribution, holdings, style, and risk;**
- d. updated research on each investment manager in the Fund's portfolio updated at least once every 18 months to include a review of investment performance, process, and the manager's organization;**
- e. conduct on-site investment and operational due diligence meetings with current investment managers a minimum of every three years;**
- f. advice on manager retention/termination; and**
- g. assist in developing a formal manager review process.**

AHIC will provide on-going monitoring and manager due diligence on all of PSERS public market investment managers. On a quarterly basis, AHIC conducts performance analysis of all current investment managers which includes performance comparisons versus peers and benchmarks. As part of our manager due diligence process we do conduct performance attribution analysis and holdings based analytics. AHIC will provide PSERS with our manager due diligence InForm/InBrief report on all investment managers. These reports are updated every 18 months and include AHIC's research opinions of the investment product on the following factors (organization, investment team, investment process, operational due diligence, performance and terms and conditions). Meetings with the investment team are conducted as part of this In-Brief report and on-site meetings are conducted at least every three years.

We are constantly updating our ratings of investment products based on our evaluations and any changes to the firm, team or investment process. The PSERS investment team will provide advice on retention/termination of a particular investment manager as part of our retainer and our on-going manager due diligence.

Investment manager due-diligence is continuous and ongoing, therefore we are unable to provide an estimate as to the person hours associated with these items.

14) Advise PSERS' Investment Professionals and the Board about new developments in investment management techniques and portfolio management strategies. Analyze how new techniques might improve the investment program and whether they should be considered for implementation.

Please see item 15 for a description of our services.

15) Make available all firm research, including proprietary research, regardless of the firm department in which it was created. Research must be made available by electronic system.

Items 14 and 15 listed above are included as part of on-going retainer relationship. AHIC will provide PSERS' Investment Professionals and the Board with our best thinking on new investment management techniques and portfolio management strategies as they are identified as well as provide advice on the best way to implement these investment ideas.

PSERS will receive all of our research reports including access to proprietary research via the client portal. PSERS will continue to have access to our complete proprietary manager research InView platform where all of our manager research on all investment managers is housed. PSERS will continue to receive all AHIC's research pieces including our many white papers.

Access to this research is continuous and ongoing, therefore we are unable to provide an estimate as to the person hours associated with these items.

16) Provide access and consultation with the firm's research staff.

PSERS will have access to all of AHIC's GIM staff for conference calls and meetings as needed.

17) Meet with the Board to report on investment matters. Generally, there are six regularly scheduled Board meetings annually. Special meetings may be scheduled as needed.

The consulting team led by Claire will meet with the Board to report on investment managers at all regularly scheduled Board meetings. Kevin will be available to review the DC Plan with the Board as needed at any of the six scheduled Board meetings.

18) Report the performance results to the Board quarterly, including relative results versus established benchmarks, results versus other public defined benefit pension plans, and the returns relative to the risks taken.

AHIC will present the performance reports at the quarterly Board meetings.

19) Maintain and provide access to a database of U.S. and non-U.S. investment managers, including their philosophies, processes, organizations, performance, fees, and clients.

AHIC utilizes eVestment Alliance investment manager database for this data.

20) Provide and maintain a secure, client-facing, web-based platform that is frequently updated and continuously available to PSERS that contains investment due diligence and operational due diligence reviews and reports, quantitative reports, activity notes related to managers, industry research, portfolio builder analytics, monitoring tools, customizable manager searches, and interactive risk exposure tools, allowing PSERS to:

- a. formulate investment policy and implement strategies;**
- b. monitor and evaluate individual portfolio, asset class, and total fund performance, risk, and attribution analytics;**
- c. formulate investment policy and implement strategies;**
- d. develop asset allocation and rebalancing recommendations;**
- e. select and evaluate public market investment managers, including public market manager research and consultant ratings;**
- f. analyze and optimize manager teams; and,**

- g. compare the Fund performance, including ex-post risk-adjusted performance, at the asset class and total fund levels to various peer groups.***

It is expected that at least 20 years of the Fund's historical performance data, by investment portfolio, asset class, and at the total fund level will be included and that the database will be updated on a monthly basis. The foregoing services shall be made available directly to PSERS through CONSULTANT's proprietary tools or indirectly through licensed third party applications.

AHIC will provide PSERS access to several PC-Based investment tools which can assist the PSERS Investment Professionals with the evaluation of the portfolio as well as access to a client portal as described in our technical proposal.

The access to these tools will be on-going as part of our full retainer relationship.

- 21. Provide (a) two, one-day, or (b) one, two-day, on-site, Fiduciary and Governance training sessions per year, which can be new Board member training, Board member training, PSERS' Investment Professional training, or some combination thereof. PSERS reserves the right to videotape any training sessions for educational purposes.***

Our Fiduciary Services team, led by Jeanna Cullins, will provide training to the Board and staff as necessary. In addition, AHIC offers several opportunities for Board and staff training including our client conference which is held in Chicago every two years.

- 22. Advise the Board and PSERS' Investment Professionals on risk-related subjects (e.g., risk measurement, risk mitigation).***

Our Investment Policy Services team, led by Phil Kivarkis, will advise the Board and staff on risk-related subjects through a combination of asset-liability studies, liquidity analysis, stress testing analysis, risk budgeting, risk factor decomposition, and manager style analysis.

- 23. Advise the Board and PSERS' Investment Professionals on fiduciary and governance related subjects as requested by PSERS, including the following items:***

- (a) Provide advice and insights, as may be requested by PSERS, on public pension fund industry common and best practices;***
- (b) Assist as may be requested by PSERS with the development of new Board member orientation materials and conduct orientation sessions;***
- (c) Review and make recommendations, consistent with industry best practices, regarding clarity and documentation of the Board's governance framework, including the Investment Policy Statement ("IPS"), Board and Committee Charters, Delegations of Authority, investment implementation policies and procedures, etc.;***
- (d) Assist as may be requested with the development of a Board authority and delegation matrix, including:***
 - (i) Clarification of what authority the Board has retained, what authority has been delegated, and to whom, and***
 - (ii) Delegations to PSERS' Investment Professionals from the Board and/or CIO.***

- (e) Assist, as may be requested by PSERS, with strategic planning;**
- (f) Develop and administer, as may be requested by PSERS, a Board annual self-evaluation process.**

Our Fiduciary Services team, led by Jeanna Cullins, will provide fiduciary and governance advice as needed.

24. Carry out other assignments that may be specified by the Board and PSERS' Investment Professionals, as required.

As part of our retainer relationship, AHIC will provide the Board and staff with advice on risk management as well as access to our many risk tools. We would be happy to conduct any other projects the Board and/or PSERS' Investment Professionals would like to discuss.

25. Conduct an operational risk gap analysis which will include an evaluation of the quality of the operational policies and procedures governing PSERS' Investment Professionals. The written report will include observations, comparisons to peers and recommendations in the following areas:

- (a) Investment Framework (Front, Middle, and Back Office)**
- (b) Trade/Transaction Execution Policies and Procedures**
- (d) Investment and Counterparty Risk Oversight**
- (e) Compliance and Audit Testing**
- (f) Data Governance, Technology and Business Continuity and Disaster Recovery Plans**
- (g) Key service provider selection and monitoring procedures.**

- 1) We would start by requesting information from the client. This would take the form of a DDQ and Document Request. This step does require a resource commitment from the client. Depending on the scope and the client's needs we might request that some sections (strategy-level items) are completed multiple times (For example, once for the internally managed fixed income mandates, once for the internally managed equity mandates, and once for the manager of manager portion of the portfolio).
 - a. We have two ways to handle the DDQ/Information Request at this time:
 - i. Word version (attached as Pension DDQ and Pension Document Request): This version/approach would likely be a bit easier administratively for PSERS to complete. NOTE: In regard to the question below about compliance/risk items, this set of information request documents does include some compliance and risk management items, but I would want to get some additional guidance on the interest in this (particularly in regard to compliance) as our focus on compliance is typically regulatory compliance (for example, SEC) which would not be applicable in a pension plan setting. The downside here is that with this approach our feedback would be primarily qualitative.
 - ii. Online version (samples attached here in Word as Aon DDQ AP/AlphaPipe): This version/approach covers substantially similar areas and topics but with a different level of granularity; however, a good portion of the questions would be N/A for a pension client. This would probably require a bit more administrative burden from PSERS. The advantage to this approach is that for a range of operational factors we would be able to supplement our qualitative feedback with additional empirical support in comparing how a range of the client's

operational processes compare to what we see to commercial asset managers. Obviously this is not entirely an apples/apples comparison environment, but given that many pensions aspire to operate comparably to a best-in-class asset manager, having more concrete metric-based support may be of interest and value to PSERS.

- b. We can accommodate either approach based on the your interest and need.
- 2) Our project team would review the information in detail in advance of a series of onsite interviews and meetings.
 - a. These meetings would generally involve 1:1 discussions with a range of select client employees, primarily senior level but also some production level personnel.
 - b. We would propose a project team of 3 from Aon (including One Partner, One Associate Partner, and One Senior Consultant) and 1.5 days of interviews
 - c. The meetings may include some demonstrations of processes but **this is not an Audit. We are not comprehensively testing the implementation of policies and procedures, but rather working to form an opinion of the quality of the policies and procedures to begin with.**
 - d. We may also seek to interview and/or otherwise interface with select client service providers (cannot establish the need / range of this until we have the information request back, as it's dynamic).
- 3) Our project team would then collate our information from the written response, conduct any follow-ups, and assess the client's policies and procedures across the range of Core Topics/Areas of Review noted in the table below:

Core Topics	Areas of Review	
Corporate and Organizational Structure	<ul style="list-style-type: none"> ▪ Corporate Structure – control, decision making, and oversight ▪ Organizational Structure – segregation of duties and staffing adequacy/competency 	<ul style="list-style-type: none"> ▪ Key person exposure and succession planning ▪ Employee Retention and Turnover ▪ Background checks
Trade/Transaction Execution	<ul style="list-style-type: none"> ▪ Broker/counterparty selection ▪ Pre-trade compliance 	<ul style="list-style-type: none"> ▪ Trade controls ▪ Allocations
Middle/Back Office and Valuation	<ul style="list-style-type: none"> ▪ Trade confirmation ▪ Reconciliation ▪ Cash controls 	<ul style="list-style-type: none"> ▪ Collateral administration ▪ Valuation ▪ Book of record and shadow accounting
Investment and Counterparty Risk Oversight	<ul style="list-style-type: none"> ▪ Investment Risk Program – oversight and control ▪ Counterparty Risk – oversight and control 	<ul style="list-style-type: none"> ▪ Leverage Use – oversight and control
Compliance and Audit/Testing	<ul style="list-style-type: none"> ▪ Compliance program – Adequacy and staffing ▪ Policies and procedures ▪ Conflicts of interest ▪ Operational Risk – Oversight of non-investment risks 	<ul style="list-style-type: none"> ▪ Controls testing program – Range and implementation
Technology and BC/DR	<ul style="list-style-type: none"> ▪ Technology Infrastructure – Hardware and application ▪ Technology and Physical Security ▪ Change Management – New installs and upgrades 	<ul style="list-style-type: none"> ▪ Disaster Recovery – Technology capabilities ▪ Business Continuity – Employee training

Key Service Providers

- Selection and Monitoring processes and procedures

- Administrator, Audit, Legal, IT, Custodian, Compliance Consultant, Valuation Agents

- 4) The project team would generate a Gap Analysis Summary Report (or similar) which will present the following:
 - a. Range of policies and procedures we assessed
 - b. Whether we find that each policy and procedure assessed aligns with best practice or whether a “gap” exists
 - i. NOTE: It is in this area that PSERS’ choice of approach (Word or Online questionnaire) would impact what analysis we can apply. In the case of the Word approach, our assessment here would rely on our subject matter expertise and judgment; in the case of the online approach, we should be able to supplement our analysis for select items with more objective/empirical information (for example, if PSERS had a specific gap in cyber security we would be in a position to note not only the gap, but provide context such as “X % of investment managers we have collected this information about do NOT have this gap; PSERS would fall in the 3rd quartile.”)
 - c. In the case of a gap, makes recommendations for how the client may amend or mitigate the gap.
 - d. In the case of multiple gaps, provide additional guidance as to severity/prioritization for addressing gaps

While the project team would be available after the delivery of results for additional questions or consultation, **implementation of the changes recommended, i.e. draft policies/procedures, etc. is NOT included in the scope of the proposed project.**

An estimate of the total person hours associated with the operational gap analysis is 175 hours.

B. In providing Performance Measurement Services for the Fund, including all major asset classes recognized by PSERS as well as individual portfolios, the consultant will:

1. **Prepare a written monthly report containing the calculated total return (gross and net of fees) for asset class, portfolio management styles, and individual portfolios, and compare PSERS’ calculated data with benchmarks determined by PSERS and with data for a similar population of funds by asset class and portfolio management styles for all of the public market portfolios and composites. Returns should be calculated for the following time periods: one-month, three-months, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 20-year, 25-year, 30-year, and since inception.**
2. **Prepare a quarterly written report containing performance measurement attribution and analysis for each asset class and individual portfolio. The report should include a historical return analysis, dollar oriented analysis, return oriented (wealth relative) analysis, excess return analysis, and risk/return analysis. Returns should be calculated for the following time periods: quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, 10-year, 20-year, 25-year, 30-year, and since inception.**
3. **Reconcile performance with both individual portfolio managers as well as the custodian bank on a monthly basis.**
4. **Calculate PSERS’ money weighted rate of return as required by GASB 75.**
5. **Create additional composites with historical returns for those composites as requested by PSERS.**

6. *Provide quarter, fiscal and calendar year-to-date, 1-year, 3-year, 5-year, and 10-year quartile ranking report of composite returns by fund (i.e. total fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes).*
7. *Provide consecutive year quartile ranking reports of composite returns by fund (i.e. total fund, U.S. Equity Composite, etc.) as well as manager composite returns (for all asset classes) for the past five years.*
8. *Conduct performance attribution analysis to determine the value added by investment policy, asset allocation, and security selection.*
9. *Provide reasonable assistance to PSERS in uploading the consultant's performance data to PSERS' own investment system(s).*
10. *Prepare ex-post risk statistics and analytics for the same time periods, to the degree of depth, including benchmark comparatives, and use the same performance data from the above. Ex-post risk statistics and analytics should be robust and inclusive of industry best practices risk information.*

AHIC will provide performance reporting including monthly performance flash reports and detailed quarterly performance reports. We have included samples of our performance reports in the **Appendix** section. Our performance reporting system and reports can provide all of the functionality outlined in Item B. 1–10.

An estimate of the person hours required to conduct the monthly and quarterly performance reports outlined above is 75–150 hours per quarter.

III-2. Requested Services: Trust

The contractor will provide consulting services for the Trust including:

- 1. Review each plan's existing investment options.**
- 2. Determine if the investment options offered by each plan are optimum choices given the considerations for diversification, risk and return.**
- 3. Recommend additions or deletions to investment options as needed.**
- 4. Provide a recommended transition plan and timeline incorporating any proposed changes in investment options.**

AHIC will review the proposed investment structure for the new Trust and we seek to ensure that there are no investment gaps. We will also review the proposed mutual fund line-up and provide our ratings on these funds and provide recommendations on any proposed additions or deletions.

An estimate of the total person hours is 150 hours.

- 5. Conduct a review of each plan's pricing structure including fund management fees and terms between the plans and the third party administrator (TPA).**

Once the Trust becomes live on July 1, 2019, AHIC will evaluate the Total Plan Cost of the Trust (both investment and administrative costs) and benchmark these costs versus relevant peer benchmarks. We have suggested doing this analysis in January of 2020 once the Plan has been live at least 6 months. This analysis will be updated every other year.

An estimate of the total person hours is 50 hours.

- 6. Work with the TPA to review specific plan metrics, provide best practices and recommendations, and address issues that arise each quarter.**

AHIC will coordinate with the TPA regarding plan usage and assist in addressing any issues that may rise throughout the engagement.

- 7. Assist in the development of investment policies for the plan.**

AHIC will assist PSERS develop the Investment Policy Statement for the new DC Trust.

An estimate of the total hours is 50 hours.

- 8. Annually review general investment policy documents.**

AHIC will review the Investment Policy Statement annually and will recommend any changes as needed.

- 9. Periodically review goals, objectives and best practices with PSERS' investment committee.**

AHIC will review best practices for DC Plans with the PSERS investment committee on a regular basis as needed.

- 10. Recommend enhancements to PSERS' investment committee governance processes.**

- 11. Perform periodic fiduciary training.**
- 12. Monitor, review, and provide advice on legislative and regulatory issues.**
- 13. Monitor, review, and provide advice regarding best practices.**
- 14. Monitor, review, and provide advice regarding fiduciary obligations.**

AHIC's Fiduciary team will provide advice on best practices and updates on legislative and regulatory issues. The team will also conduct fiduciary training to the PSERS Board as needed.

- 15. Provide ongoing review of strengths and vulnerabilities in current practices.**
- 16. Serve as the liaison between the record-keeper and PSERS to maximize the vendor relationship, resolve issues with the record-keeper, and ensure contractual commitments are met.**
- 17. Lead and otherwise assist in any requisite RFP, RFQ, or RFI processes.**

AHIC will provide ongoing advice and assistance to PSERS' Investment Professionals and the Board on the strengths of the DC plan, evolving best practices and will act as a liaison with the recordkeeper and PSERS. AHIC has a specialized DC team knowledgeable of vendor administrative topics.

III-11. Objectives and Additions to Standard Terms and Conditions

The Offeror will identify which, if any, of the terms and conditions contained in **Part VI and Appendix A** it would like to negotiate and what additional terms and conditions the Offeror would like to add to the standard contract terms and conditions. The Offeror's failure to make a submission under this paragraph will result in its waiving its right to do so later, but the Issuing Office may consider late objections and requests for additions if to do so, in the Issuing Office's sole discretion, would be in the best interest of the Commonwealth. The Issuing Office may, in its sole discretion, accept or reject any requested changes to the standard contract terms and conditions. The Offeror shall not request changes to the other provisions of the RFP, nor shall the Offeror request to completely substitute its own terms and conditions for **Part VI and Appendix A**. All terms and conditions must appear in one integrated contract. The Issuing Office will not accept references to the Offeror's, or any other, online guides or online terms and conditions contained in any proposal.

Regardless of any objections set out in its proposal, the Offeror must submit its proposal, including the cost proposal, on the basis of the terms and conditions set out in **Part VI and Appendix A**. The Issuing Office will reject any proposal that is conditioned on the negotiation of the terms and conditions set out in **Part VI and Appendix A or to other provisions of the RFP as specifically identified above**. The Board will not consider proposals that contain any limitations of Offeror liability for services provided. Any proposal containing such a limitation shall be rejected.

Response:

Aon and PSERS underwent extensive contract negotiations in the fall of 2018 after Aon was initially selected to move to contract negotiations in August 2018. Aon and PSERS fully negotiated in good faith all contract matters to a mutually-agreed conclusion, and as such the parties resolved all exceptions. Aon stands behind the draft agreement dated November 27, 2018. We are confident that Aon and PSERS can move quickly to fully execute a contract based on the work conducted in the Fall/Winter of 2018.

APPENDIX C

DOMESTIC WORKFORCE UTILIZATION CERTIFICATION

To the extent permitted by the laws and treaties of the United States, each proposal will be scored for its commitment to use the domestic workforce in the fulfillment of the contract. Maximum consideration will be given to those offerors who will perform the contracted direct labor exclusively within the geographical boundaries of the United States or within the geographical boundaries of a country that is a party to the World Trade Organization Government Procurement Agreement. Those who propose to perform a portion of the direct labor outside of the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement will receive a correspondingly smaller score for this criterion. In order to be eligible for any consideration for this criterion, offerors must complete and sign the following certification. This certification will be included as a contractual obligation when the contract is executed. Failure to complete and sign this certification will result in no consideration being given to the offeror for this criterion.

I, Steve Cummings, NA Chief Executive Officer [title] of Aon Hewitt Investment Consulting, Inc.
 [name of Contractor] a Illinois [place of incorporation] corporation or other legal entity, ("Contractor")
 located at 200 E. Randolph St., Suite 1500, Chicago, IL 60601 [address], having a Social Security or Federal
 Identification Number of 36-3109431, do hereby certify and represent to the Commonwealth of
 Pennsylvania ("Commonwealth") (Check one of the boxes below):

☒ All of the direct labor performed within the scope of services under the contract will be performed exclusively within the geographical boundaries of the United States or one of the following countries that is a party to the World Trade Organization Government Procurement Agreement: Aruba, Austria, Belgium, Bulgaria, Canada, Chinese Taipei, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Liechtenstein, Lithuania, Luxemburg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom

OR

☐ _____ percent (_____ %) [Contractor must specify the percentage] of the direct labor performed within the scope of services under the contract will be performed within the geographical boundaries of the United States or within the geographical boundaries of one of the countries listed above that is a party to the World Trade Organization Government Procurement Agreement. Please identify the direct labor performed under the contract that will be performed outside the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement and identify the country where the direct labor will be performed: _____

[Use additional sheets if necessary]

The Department of General Services [or other purchasing agency] shall treat any misstatement as fraudulent concealment of the true facts punishable under Section 4904 of the Pennsylvania Crimes Code, Title 18, of Pa. Consolidated Statutes.

Attest or Witness:

Aon Hewitt Investment Consulting, Inc.
 Corporate or Legal Entity's Name

 Signature/Date


 Signature/Date

 Printed Name/Title

Steve Cummings, NA Chief Executive Officer
 Printed Name/Title

APPENDIX D

IRAN FREE PROCUREMENT CERTIFICATION

<http://www.dgs.pa.gov/Documents/Procurement%20Forms/IranFreeProcurementCertificationForm.pdf>

<http://www.dgs.pa.gov/Documents/Procurement%20Forms/ProposedIranFreeProcurementList.pdf>

IRAN FREE PROCUREMENT CERTIFICATION FORM

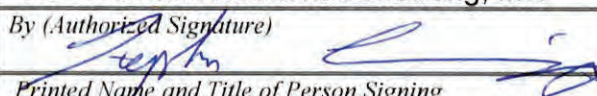
(Pennsylvania's Procurement Code Sections 3501-3506, 62 Pa.C.S. §§ 3501-3506)

To be eligible for an award of a contract with a Commonwealth entity for goods or services worth at least \$1,000,000 or more, a vendor must either: a) certify it is **not** on the current list of persons engaged in investment activities in Iran created by the Pennsylvania Department of General Services ("DGS") pursuant to Section 3503 of the Procurement Code **and** is eligible to contract with the Commonwealth under Sections 3501-3506 of the Procurement Code; or b) demonstrate it has received an exception from the certification requirement for that solicitation or contract pursuant to Section 3503(e).

To comply with this requirement, please insert your vendor or financial institution name and complete **one** of the options below. Please note: Pennsylvania law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Section 3503 of the Procurement Code.)

OPTION #1 - CERTIFICATION

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS **and** is eligible to contract with the Commonwealth of Pennsylvania Sections 3501-3506 of the Procurement Code.

<i>Vendor Name/Financial Institution (Printed)</i> Aon Hewitt Investment Consulting, Inc.	
<i>By (Authorized Signature)</i> 	
<i>Printed Name and Title of Person Signing</i> Steve Cummings, NA Chief Executive Officer	<i>Date Executed</i> 2/14/19

OPTION #2 – EXEMPTION

Pursuant to Procurement Code Section 3503(e), DGS may permit a vendor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to enter into a contract for goods and services.

If you have obtained a written exemption from the certification requirement, please fill out the information below, and attach the written documentation demonstrating the exemption approval.

<i>Vendor Name/Financial Institution (Printed)</i>	
<i>By (Authorized Signature)</i>	
<i>Printed Name and Title of Person Signing</i>	<i>Date Executed</i>

APPENDIX E

Trade Secret Confidential Proprietary Information Notice Form

http://www.dgs.pa.gov/Documents/Procurement%20Forms/TradeSecret_ConfidentialPropertyInfoNotice.pdf

Trade Secret/Confidential Proprietary Information Notice

Instructions:

The Commonwealth will not assert on behalf of a third party an exception to the public release of materials containing information believed to be exempt from public disclosure, including trade secrets or confidential proprietary information, unless the materials are accompanied, at the time they are submitted, by this form or a document containing similar information. In addition, in order to protect the safety and security of individuals, infrastructure, and information technology systems, the Commonwealth requires third parties to designate as confidential any information submitted by the third parties that, if disclosed, would be reasonably likely to jeopardize safety or security.

It is the responsibility of the party submitting this form to ensure that all statements and assertions made below are legally defensible and accurate. The Commonwealth will not provide a submitting party any advice with regard to Pennsylvania's *Right-to-Know Law*, 65 P.S. §§ 67.101—67.3104, or laws relating to trade secret or confidential proprietary information.

Name of submitting party:

Aon Hewitt Investment Consulting, Inc.

Contact information for submitting party:

Claire Shaughnessy
Partner
Merritt 7 Corporate Park, Building 201
Norwalk, CT 06851
+1 203 523 8163
claire.shaughnessy@aon.com

Please provide a brief overview of the materials that you are submitting (e.g. bid proposal, quote, grant application, statement of work, technical schematics):

Aon Hewitt Investment Consulting, Inc. is submitting our response to the Commonwealth of Pennsylvania Public School Employees' Retirement System RFP #PSERS RFP 2018-6 for the bid for Investment Consulting Services. Our response includes the technical and cost proposals which includes the applicable forms and appendix items.

Please provide a brief explanation of why the materials are being submitted to the Commonwealth (e.g. response to bid, RFP or RFQ #12345, application for grant XYZ being offered by the Department of Health, documents required to be submitted under law ABC):

Aon Hewitt Investment Consulting, Inc. is submitting our response to the Commonwealth of Pennsylvania Public School Employees' Retirement System RFP #PSERS RFP 2018-6 for the bid for Investment Consulting Services.

Please indicate if any information has been included that you believe is exempt from public disclosure by checking the appropriate box below: (Note: Financial information submitted in response to an RFP or IFB to demonstrate economic capability is exempt from public disclosure in accordance with Section 708(b)(26) of the Right-to-Know Law, 65 P.S. 67.708(b)(26)).

- ☐ No information has been included that I believe is exempt from public disclosure.
- ☒ Information has been included that I believe is exempt from public disclosure.

Please provide a list detailing which portions of the material being submitted you believe are exempt from public disclosure. This includes trade secret, confidential or proprietary information, or information that if disclosed would be reasonably likely to jeopardize the safety or security of an individual, infrastructure, or information technology system. Please provide an explanation of why you think those materials constitute a trade secret, confidential or proprietary information, or why disclosure of those materials would be reasonably likely to jeopardize safety or security. Also, please mark the submitted material in such a way to allow a reviewer to easily distinguish between the parts referenced below. (You may attach additional pages if needed)

Note: Without substantial justification, the following information will not be considered a trade secret or confidential proprietary information:

- Any information submitted as part of a vendor's cost response.
- Information submitted as part of a vendor's technical response or statement of work that does not implicate safety and security, or pertain to specific business practices or product specification.
- Information submitted as part of a vendor's technical or small diverse business and small business response that is otherwise publicly available or otherwise easily obtained.
- Information detailing the name, quantity, and price paid for any product or service being purchased by the Commonwealth.

Page Number	Description	Explanation
21	2. Special Audit Reports	This is proprietary information that is privileged or confidential, the disclosure of which would cause substantial harm to Aon's ability to compete in the market.
25	I. Litigation	This is proprietary information that is privileged or confidential, the disclosure of which would cause substantial harm to Aon's ability to compete in the market.
27	J. Regarding Fiduciary Responsibilities	This is proprietary information that is privileged or confidential, the disclosure of which would cause substantial harm to Aon's ability to compete in the market.
27	K. Recent Review by Government Agency	This is proprietary information that is privileged or confidential, the disclosure of which would cause substantial harm to Aon's ability to compete in the market.
Appendix Item	Sample Operational Due Diligence Summary Assessment	This is information that includes our proprietary research that is, in part, the basis of our value to clients. It is not generally known to and is not readily ascertainable by proper means by Aon competitors or other persons who can obtain economic value from its disclosure or use; and this information is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

Appendix Item

Sample InBrief
Report

This is information that includes our proprietary research that is, in part, the basis of our value to clients. It is not generally known to and is not readily ascertainable by proper means by Aon competitors or other persons who can obtain economic value from its disclosure or use; and this information is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

Appendix Items Disclosure: This is information that includes our proprietary research that is, in part, the basis of our value to clients. It is not generally known to and is not readily ascertainable by proper means by Aon competitors or other persons who can obtain economic value from its disclosure or use; and this information is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

Acknowledgment


The undersigned party hereby agrees that it has read and completed this form, and has marked the material being submitted in accordance with the instructions above. The undersigned party acknowledges that the Commonwealth is not liable for the use or disclosure of trade secret, confidential or proprietary information, or information that if disclosed would be reasonably likely to jeopardize the safety or security of an individual, infrastructure or information technology system, where that data or information has not been clearly marked as such, and which was not accompanied by a specific explanation included with this form.

The undersigned agrees to defend any action seeking release of the materials it believes to be trade secret, confidential or proprietary, or would be reasonably likely to result in a safety or security risk if disclosed. The undersigned also agrees to indemnify and hold harmless the Commonwealth, its agents and employees, from any judgments awarded against the Commonwealth in favor of the party requesting the materials, and any and all costs connected with that defense. This indemnification survives so long as the Commonwealth has possession of the submitted material, and will apply to all costs unless and until the undersigned provides a written statement or similar notice to the Commonwealth stating that it no longer wishes to exempt the submitted material from public disclosure.

The undersigned acknowledges that the Commonwealth is required to keep all records for at least as long as specified in its published records retention schedule.

The undersigned acknowledges that the Commonwealth reserves the right to reject the undersigned's claim that the information is trade secret, confidential, proprietary or is reasonably likely to result in a safety or security risk if disclosed, if the Commonwealth determines that the undersigned has not met the burden of establishing that the information constitutes a trade secret, confidential, or is otherwise exempt. The undersigned also acknowledges that if only a certain part of the submitted material is found to constitute a trade secret, is confidential or proprietary, or is otherwise exempt, the remainder of the submitted material will become public; only the protected information will be removed and remain nonpublic.

If being submitted electronically, the undersigned agrees that the mark below is a valid electronic signature.

	NA Chief Executive Officer	2/14/19
Signature	Title	Date